

NEWS SUMMARY

GENERAL

Walls to command Zimbabwe army

General Peter Walls, the former chief of the white-run Rhodesian security forces, is to command the combined regular and militia forces making up the new army of the independent Zimbabwe.

His appointment, to be announced soon by Mr. Robert Mugabe, Prime Minister, is likely to last at least a year while the regular army, Zimla, and Zimpro forces are reorganised.

General Walls was initially appointed to supervise this reorganisation but Mr. Mugabe has now decided that the more efficient if conducted by a joint command of the three forces, with the general at the head. Back Page.

Gandhi escape

May has been charged with attempted murder after throwing a brick at Mrs. Indira Gandhi, Indian Prime Minister, as she left New Delhi's Parliament House. The knife missed her and struck a security officer. Page 3.

Afghan ambush

Afghan rebels claimed they killed 600 Soviet soldiers in an ambush on a Soviet-Afghan armoured column in the Smanjan province of northern Afghanistan.

Teachers pay

About 400,000 of Britain's teachers should receive an 18.2 per cent pay rise for 1979 on top of the 9.3 per cent they were awarded a year ago, the Clerg. Commission said. The recommendation brought a mixed response from teachers' unions. Page 3, Back Editorial Comment, Page 18.

ILEA break-up

Proposals to split the Inner London Education Authority among the 12 inner London boroughs are expected to be included in the next Queen's Speech. The Cabinet will discuss the plans in the next few weeks. Page 7.

System X start

Britain's first fully computerised (digital) telephone exchange, known as System X, will begin operating in July, six months earlier than planned, the Post Office said. Page 7.

Cricket sponsors

The National Westminster Bank is to take over the sponsorship of cricket's Gillette Cup, for at least five years from 1981. The competition will be renamed the NatWest Bank Trophy. Page 5.

Beaton £1m will

Sir Cecil Beaton, the photographer, left £597,787 gross, £590,717 net in his will. His bequests included an oil painting to Lord Cawley, the film actress and two children to Lady Diana Cooper.

Banana booty

Customs and Excise officers seized 500kg of cannabis, worth about £70,000, from a banana boat at Newport, Rhode, shortly after it arrived to inaugurate an £800,000 terminal.

Briefly

Sixteen people died when a ferry boat capsized at the Thai resort of Pattaya.

Doctors attending Yugoslavia's President Tito said that damage to his liver was worsening.

PUBLISHER'S NOTICE

The Financial Times apologises for errors contained in this issue which are due to difficulties in the reading department.

CHIEF PRICE CHANGES YESTERDAY

(Prices in pence unless otherwise indicated)

RISER	Stewart Wrightson	205	+ 10
Treasury 12pc 1984-85	Thomson T-Line	65	+ 11
Treasury 15pc 1985-86	Thorn EM	296	+ 10
Automated Security	United Biscuits	74	+ 4
Bass	Wagon Finance	41	+ 5
Blue Circle	Websters	38	+ 4
Bovis	Willis Faber	238	+ 8
Bovis	Carlisle Capel	85	+ 6
Bovis (C. T.)	LASMO	483	+ 33
Bovis (C. T.)	Leichhardt Exploration	225	+ 10
Bovis (C. T.)	North Kalguri	370	+ 10
Bovis (C. T.)	RTZ	252	+ 16
Bovis (C. T.)	Tanks	252	+ 16
Bovis (C. T.)	FALLS		
Bovis (C. T.)	Glaxo	226	+ 14
Bovis (C. T.)	Richards & Wallington	60	+ 5
Bovis (C. T.)	EP	340	+ 14
Bovis (C. T.)	Guthrie	870	+ 42
Bovis (C. T.)	Pacific Copper	196	+ 14
Bovis (C. T.)	Sainsbury (J.)	296	+ 9

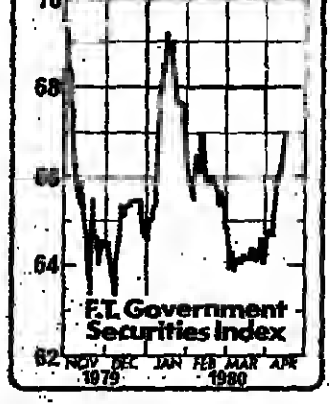
BUSINESS

Sterling firm; gold off \$3

STERLING was firmer overall, closing 75 points up at \$2.2030. Its trade-weighted index was 72.7 (72.6). DOLLAR eased to DM 1.8725 (DM 1.88) and its index fell to 89.2 (89.6). Page 29.

GOL DROST \$3 in London to close at \$524.5. Page 29.

GILTS demand was strong, and the short tap was exhausted.



The Government Securities index rose 0.30 to 66.96. Page 32.

EQUITIES were affected by disappointing Glaxo results, and the FT 30-share index, up 5.0 at 1.00, closed only 2.6 higher at 432.2. Page 32.

WALL STREET was down 3.10 at 733.45 before the close. Page 30.

WAGE rates in private sector settlements up to last month rose by 16.5 per cent, Chancellor Sir Geoffrey Howe told an all-party committee of MPs. Back Page.

CASH amount needed for the central Government per bill in the current financial year will be about 25 per cent higher than in 1979-80, a senior Treasury official said. Page 5.

ORDERS for two more nuclear stations using the advanced gas-cooled reactor are to go ahead this summer, David Howell, Energy Secretary, confirmed. Back Page.

BARCLAYS Bank announced a 10-year plan to attract new accounts from wage and salary earners. Page 29.

NATIONAL WESTMINSTER Bank's main computer centre in the City is threatened today by a one-day strike.

REVOLT against BL Cars' 5 per cent pay package grew as over 2,000 workers joined the strike, bringing the total to 14,000. Back Page.

POST OFFICE engineers pay award averaging 54 per cent by an arbitration panel is likely to compound the Post Office's difficulties over telecommunications pay. Page 8.

COMANIES

MARSH and McLennan of U.S., the world's biggest insurance broker, raised its bid for C. T. Bowring of the UK by more than £18m to £264m, and gained support of Bowring directors. Back Page and Lex, Back Page.

ICI chairman Sir Maurice Hodgson said at the annual general meeting that prospects for the coming year were uncertain and there was some evidence of forward demand slackening. Page 20.

GLAXO HOLDINGS' first-half pre-tax profits fell 18.18m to £30.32m in spite of external sales up from £268.2m to £295.9m. Page 20 and Lex, Back Page.

STANDARD TELEPHONES and Cables, the UK subsidiary of ITT of the U.S., lifted 1979 pre-tax profits by 86.5m to £33.4m on turnover of £436.9m (£373.9m). Page 20 and Lex, Back Page.

UK backs Carter on Iran but avoids pledge on action

BY OUR LOBBY AND FOREIGN STAFF

PRESIDENT CARTER's week-end moves to intensify pressure on European allies to support his sanctions against Iran succeeded yesterday in getting a quick and positive response from Britain and West Germany.

Mrs. Margaret Thatcher made clear in a Commons statement that she gave full backing to Mr. Carter, but avoided giving any commitment on specific action. The Government is placing great emphasis on the need for concerted action by the U.S., the Common Market, Japan and other Western countries.

West Germany has urged its European Community partners jointly to approve economic sanctions against Iran, using the EEC Treaty of Rome as legal basis for common action.

Both Germany and the UK see next Monday's and Tuesday's meeting of EEC Foreign Ministers in Luxembourg as the crucial test of EEC backing for the U.S.

Unilateral action by the UK in support of Mr. Carter has not been ruled out by the government, but the hope is that the Luxembourg meeting will provide a basis for joint action.

Lord Carrington, the Foreign Secretary, will take a package of proposals to the meeting.

some in the draft United Nations resolution vetoed by the Russians on January 13 and some additional ones now under consideration in Whitehall.

There remains considerable scepticism among MPs at Westminster at the prospect of a total trade embargo against Iran, partly because many are worried

about whether adequate international support would be forthcoming and partly because they think primary Westminster legislation would be needed.

Bonn believes that by acting through the Rome Treaty even those EEC member-states at present without national legislation allowing sanctions to be imposed could speedily gain the necessary powers.

This is because a decision on sanctions by the EEC Ministerial Council, taken on a proposal of the Brussels Commission, would promptly have the force of law in nine member-states.

The Germans see two articles of the Rome Treaty which might permit such a decision in the case of Iran.

One is Article 113, involving operation of the Common Com-

mercial Policy, which would need approval by a qualified majority of the council.

The other is Article 235, which confers very broad powers but would need both unanimous Council approval and consultation with the European Parliament.

Given the time pressure, the former avenue has found most favour with German officials so far.

The nine permanent representatives to the Community had a special meeting in Brussels yesterday at which the West German case was discussed.

But in the absence of adequate preparation and of instructions from their Governments, the ambassadors were unable to offer any response.

In another move that was apparently intended to underline President Carter's week-end statement that military action against Iran could not be ruled out, the U.S. Government warned its NATO allies that they "must take up the slack" likely to be produced by an increased American military commitment in the area of the Gulf and the Indian Ocean.

It said a number of divisions of reservists would need to be created in Europe to replace U.S. troops that are to be earmarked for the Middle East.

GEC wins £206m order from South Africa

BY LISA WOOD, BLAINE WILLIAMS AND QUENTIN PEEL

THE General Electric Company has won its biggest export order ever with a £206m order from South Africa for six 600 megawatt turbine generators for a new coal-fired power station.

The order, placed by the Electricity Supply Commission of South Africa (ESCOM), was won against competition from MAN of West Germany and French manufacturers, at a time of low international and domestic demand for turbine generating plant.

Mr. Bob Davidson, managing director of GEC Turbine Generators, said the order was won at a time when the UK power-plant market was in a depressed state. The UK turbine industry was running at only 40 per cent capacity in the 1970s.

During the past five years 2,000 MW of power plant had been ordered in the UK, he said, and GEC had not been allowed to compete for it.

"We in GEC recognised there was no future for the industry in the UK without winning export orders," he said.

"During the past five years we have won export orders for 12,000 MW valued at nearly £1bn, which represents about 85 per cent of the UK exports of turbine generating-plant for this period. This was six times the amount ordered in the UK."

Most of the UK orders have been taken by NEL-Parsons, part of Northern Engineering Industries group. NEL has worked in hand on the design of the Advanced Gas Cooled reactor at Haysbam 2. Its exports include work for Australia, New Zealand and South Korea; it has not received a new order since December 1978.

The six GEC 600 MW turbine generators, complete with feed heating and condensing plant, are for the coal-fired Tutuka power station, to be built 150 km from Johannesburg.

The first unit is scheduled to start operations in early 1985 and the remaining units at nine-month intervals. The units will be duplicates of the six 600 MW units which GEC is supplying to ESCOM for the Duvha power station.

ESCOM only invited tenders for the plant at Tutuka from companies already working on power stations in South Africa. This was because ESCOM wanted to push through the orders with particular urgency to meet an expected acceleration in demand for electricity, an official said yesterday.

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Short tap runs out as gilts rally

BY DAVID MARSH

THE GILT-EDGED market had one of its best days this year yesterday, reflecting the City's belief that money supply growth is at last coming under control.

The price of long-dated stocks rose by up to 11 compared with Friday's levels, the Government's short-term "tap" stock on offer to the market ran out and heavy demand is expected at the tender for its new long-term "tap" on Thursday.

The market is continuing to regard favourably last week's banking figures indicating that the rate of money supply growth came down towards the official target range last month. There has also been some foreign buying of government stocks generated by the strength of sterling, which closed yesterday at \$2.2030 against \$2.1955 on Friday. Its trade-weighted index was 72.7, still around its highest levels of last month.

The short-dated "tap"—13 per cent Exchequer 1983—was quickly exhausted yesterday morning at 95.1, the price at which it closed on Friday.

This leaves the market without a conventional "tap" issue for the time being. The partly-paid long-dated stock announced on Friday, 13 per cent Exchequer 2004-08, will be offered at tender on Thursday. Since only £200m of the £1bn issue has to be subscribed immediately, and its terms look cheap in the light of yesterday's rally, the gilt-edged market expects it will sell quickly unless prices drop over the next few days.

The short-dated stock is the second "tap" stock to sell out this month. Since the end of March, the FT Government Securities index has risen by 2.7 per cent.

The bond market's strength creates a dilemma for the Bank of England. It does not want gilt-edged prices to rise too fast. This would bring too rapid a drop in capital market interest rates, at a time when the authorities want to keep Minimum Lending Rate at 17 per cent for another month or two at least.

But it is reluctant to issue another new tap stock too soon, for fear of aggravating indignation in the shorter end of the market. Liquidity shortages have already prompted £2bn of official help to the money market and the banks over the past few months.

Lex Back Page

Caviar sold as herring 200 Soviet officials held

BY DAVID SATTER IN MOSCOW

THE SOVIET authorities have arrested more than 200 employees of the Fisheries Ministry, including top officials, in connection with a multi-million dollar caviar swindle which appears to be among the most serious economic crimes in Soviet history.

It is understood Ministry officials made a secret and illegal agreement with a Western firm to send black caviar abroad in sealed 3.5 litre tins marked "smoked, seasoned herring."

A Western firm which imported the caviar paid the hard currency price for herring. Then it repacked the caviar and sold it at enormous profit, splitting the proceeds with Ministry officials, whose share was deposited in Swiss bank accounts.

Economic crimes involving foreign currency are punishable by death in the Soviet Union if big enough. It is believed more than 150 people could be liable to capital punishment for their role in the caviar operation, which involved the Okean stores in Moscow and was undetected for more than 10 years.

Fisheries Ministry officials asked about the report declined to speak to the Financial Times. However, an official of the Internal Affairs Ministry acknowledged he was working on an investigation involving the Okean stores, but declined to discuss the case.

The Soviet Foreign Ministry also declined to comment on the case in the press.

The Soviet system, with its uncertain distribution network, shoddy consumer goods and tough currency restrictions, creates rich opportunities for black market operations and illegal economic activity. Some are overlooked by the authorities if it is economically beneficial.

There is a history of large-scale operations, although not, it is believed, as complex as the caviar swindle. The insistence on fulfilling the plan creates possibilities for massive concealment, if all staff of an enterprise are willing to falsify reports.

What appears unprecedented in the Okean scandal is the alleged involvement of Ministry hierarchy, as opposed to individual enterprise, and that the payments were in hard currency.

The investigation has been going on since February last year, when Mr. Alexander Ishkov resigned as Fisheries Minister. Also replaced were other high officials, including Mr. Vladimir I. Rykov, a deputy minister, Mr. L. V. Nikonorov

and Mr. V. P. Zaitsev, two Ministry Secretariat members; and Mr. S. I. Gushchyan, deputy chief of resources and fish products marketing.

Besides the more than 200 people arrested in Moscow, hundreds of people involved in processing, packing and distributing caviar have been held in the provinces, especially Soviet Azerbaijan, where most black caviar originates.

Also apparently involved in the operation were scores of restaurant managers in Moscow, the Black Sea resort of Sochi, and other cities.

Mr. Ishkov has not been arrested, although the state prosecutor's office has demanded that he be charged. Other major figures are about to go on trial, however, and the investigation continues.

Red caviar from the Soviet Far East and other types of fish delicacies were also reportedly involved, but black caviar was the largest item because of the substantial increase in production from the Caspian Sea in the last 10 or 15 years.

Mr. Alexei Kosygin, the Soviet Prime Minister, is reported to have intervened for Mr. Ishkov—one of the longest-serving Ministers and a member of the Communist Party Central Committee—at the beginning of the investigation last year. It is not known if Mr. Kosygin has involved himself in the case since then.

If Mr. Ishkov were brought to trial, it would be the first time in Soviet history that a Minister had been charged with violation of the criminal code.

In the past, high-ranking officials accused of corruption have been allowed to retire or, in some cases, to retain their posts after a warning.

There is reported to be strong sentiment in favour of bringing Mr. Ishkov to trial because of the size of the operation and because top officials of an entire ministry were reportedly implicated.

It is understood the operation might have continued undetected for many more years but for what one source described as a case of "typical Russian disorganisation." Some of the mislabelled tins of caviar began to slip into general circulation.

£ in New York

	Apr. 11	Previous
spot	82.2050-80.7032, 1950-2000	
1 month	82.25-82.30, 80.75-80.80	
3 months	82.35-82.40, 80.85-80.90	
6 months	82.45-82.50, 80.95-81.00	
12 months	82.55-82.60, 81.05-81.10	

Grand Met plans Liggett bid

BY CHRISTINE MOIR

GRAND METROPOLITAN, the hotels, drinks and leisure group, plans a £415m (£189m) takeover of the U.S. Liggett Group, which has been fighting the build-up of Grand Metropolitan's holdings in the North Carolina courts.

The all-out bid runs contrary to Grand Met's statement in December, when it bought a 4.4 per cent stake in Liggett, that it "had no intention of participating in Liggett's management," but did intend to buy more shares as it saw fit.

When Grand Met's stake had reached 9.5 per cent, Liggett obtained a court injunction preventing the UK company from acquiring more shares through

the market without making a full-scale bid.

The outcome of that move was yesterday's announcement by Grand Met that it planned to offer \$50 for every Ordinary share, with proportionate offers for the preference stocks.

Grand Met has been known to contemplate a large U.S. acquisition for some time, and had already identified the wines and spirits subsidiaries, including Paddington, the company which holds distribution franchises for J & B Scotch, the

U.S. brand leader produced by Grand Met.

Those approaches were turned down and instead Liggett announced that it was asking its bankers to look for possible buyers.

Mr. Stanley Grinstead, joint managing director of Grand Met, admitted last night that this move had left the company feeling "vulnerable over both its investment in Liggett and its important J & B business."

Shares in Liggett, suspended on the announcement at \$38, are thought likely to reopen today at about \$40 to \$45. Grand Met's share price dropped by 1p to 124p in London.

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EUROPEAN NEWS

IRAN CUTBACK ALONE 'WOULD NOT BE CRITICAL'

Bonn sounds out Arab oil suppliers

BY ROGER BOYES IN BONN

WEST GERMANY will not face critical oil shortages if Iran stops supplies of crude to Europe, but serious problems could arise if Libya and Algeria follow Tehran's example.

This was the message conveyed by Herr Herbert Lewinsky, head of Mobil Oil's West German subsidiary, in an interview yesterday. But despite his assurances, it is clear that Bonn is sounding out other Arab suppliers about plugging the gap that could be opened up in the case of an Iranian stoppage.

This was understood to be one of the key issues in discussions held here between Dr. Manaf Saeed al-Otaibi, the Oil Minister of the United Arab

Emirates and West German leaders, including Chancellor Helmut Schmidt and Gunt Otto Lambsdorff, the Economics Minister.

The United Arab Emirates were Bonn's seventh most important oil supplier supplying 7.4m tonnes of crude last year. This is still somewhat below Iran's deliveries which accounted last year for 11.5m tonnes down from 17.3m tonnes in 1978.

It is evident then that the UAE alone could not be complete substitute should Iranian oil be unavailable—either because of a retaliatory move against Europe or because of a U.S. naval blockade of Iran.

Herr Lewinsky stresses that Saudi Arabia—already West Germany's top supplier ahead of Libya, Nigeria and Britain—would play the key part in saving Europe from an oil crisis in the case of Iranian stoppages.

Herr Lewinsky said that by the end of 1978, Saudi Arabia was producing the equivalent of about 350m tonnes of crude a year but was now producing only some 470m tonnes a year. It thus had the potential to fill most of a shortfall created by Iran.

The oil chief emphasised that although West Germany's major oil companies—Mobil, Exxon and Texaco—were U.S.-based, there would be no conflict of

interest should the West be forced to scramble for scarce oil. "The oil companies remain essentially commercial operations and are not the strategic or political instruments of their respective governments."

Although Iran has been supplying about 15 per cent of West German energy needs recently, the average proportion last year was 11 per cent. Such a shortfall would have to be coupled with stoppages from other countries before compulsory energy-saving measures would be implemented. In the view of senior industrialists, it is understood, however, that petrol rationing coupons have already been printed.

Chirac spells out economic programme

By David White in Paris

PROPOSALS for a new economic policy, based on a forceful recovery programme and giving top priority to employment, were spelt out yesterday by M. Jacques Chirac, who is expected to be the Gaullist challenger for the French Presidency in a year's time.

M. Chirac's plan, aiming as he did when Prime Minister in 1974-76 for higher growth, includes an extra injection of between FF10bn and FF15bn (\$1bn-£1.5bn) to boost investment.

In an interview with Le Monde, M. Chirac emphasised free-market principles, urging an end to certain kinds of Government intervention, backing the Government's policy of lifting price controls, and opposing a wage policy.

His remarks contained hints of a new electoral flavour with attacks on "high international financial interests." "Capitalism without frontiers" had never been hallowed by the Gaullists, M. Chirac said.

The former Prime Minister, who is leader of the Rassemblement pour la République (RPR), France's largest parliamentary party, said a fresh growth effort would not necessarily bring added inflation and there was no longer any direct link between the two.

He accepted that it would entail higher imports and a bigger trade shortfall, but said France could avoid having a permanent structural deficit by giving export incentives, and creating barriers to excessive purchases from abroad.

His main proposals included:

1—A 10 per cent cut in Government subsidies. This would mean higher public service charges, for which the lowest-paid would be compensated.

2—Reform of the tax system and a special levy on wealth.

3—An end to the progressive tightening of credit curbs, and facilities to reduce companies' and individuals' borrowing costs.

4—A sharply reduced intake of personnel into the 5—Reinforcement of France's nuclear submarine fleet, partly compensated by cutbacks on the cost of compulsory military service.

6—Curbs on banks' Euro-money lending operations, as part of the effort to control money supply.

CIA sees shortfall in Soviet coal production

BY ANTHONY ROBINSON, EAST EUROPEAN CORRESPONDENT

THE U.S. Central Intelligence Agency has followed up its pessimistic assessment of Soviet oil prospects in the 1980s with a new report suggesting that Soviet coal production targets will also not be reached so exacerbating the energy squeeze.

In a special report entitled "USSR: coal industry problems and prospects" the agency estimates that Soviet coal production would have to reach 370m tons by 1985 in order to meet the needs of the electricity generating industry and satisfy industrial and consumer demand.

But it noted that coal output has fallen well behind target over the current five-year plan period and actually fell by 5m tons last year to 719m tons. This was 33m tons behind the original 1979 target and this year's output is likely to be 80m tons short of the original target of 805m tons.

In making its estimate of future production, the report takes into account the decline of production in worked-out traditional fields in the accessible west of the country and the difficulties of bringing on stream gigantic open cast mines

in Siberia and Central Asia. Under these circumstances the agency estimates that coal output will increase from 725m tons in 1980 to between 765m and 785m tons in 1985.

This would imply a growth rate of 1.3 per cent annually over this period compared to 1.6 per cent annually in the 1970s. Production could rise to between 850m-900m tons by 1990 provided the technical problems associated with long distance electric power transmission are overcome, if new boilers adapted to Siberian coal are developed, and if investment takes place at a high and sustained rate.

The report also pinpoints labour shortages as a major problem in spite of the fact that Soviet miners are relatively well paid and enjoy substantial bonuses and other benefits. But the Soviet Union is also behind in technology for converting coal into oil and gas and the consequent lack of adequate facilities for large-scale inter-fuel substitution will compound their problems.

Soviet coal reserves are recognised to be huge—at least 350 years' supply at current production rates.

Chiasso adapts to leaner times

By Paul Bettis in Lugano

EXACTLY THREE years ago the Credit Suisse Chiasso branch exploded when the three senior partners of the branch were suspended for irregular practices involving some 2,170m (\$543m) of clients' funds.

The three executives were subsequently condemned in an affair which led to the withdrawal of 1.2bn in the 1977 accounts of Credit Suisse and shook the Swiss banking canon of the Ticino—among not only for its mountains and lakes but for its 45 or so banks, 6,000 banking employees and 250 bank computers.

At the time there were widespread fears of a rush to withdraw deposits from the banks in the Lugano and Chiasso areas. But although business has never been quite the same, the expected panic never occurred. There have been no bank closures, and business is seemingly trickling in again at the Credit Suisse branch at Chiasso.

Most bankers clustered in the area on the Italian border, a short drive from Milan, dismiss the affair as a bad dream. But the extraordinary boom in the regions' banking business has suffered a dramatic arrest during the past three years.

Property boom

The flood of Italian capital, which are conservatively estimated to have swelled the deposits of the Ticinese banks by some £20bn over the previous two decades, has almost dried up.

The property boom, once fuelled by Italian funds, is over. The Italian day-trippers, who poured in at weekends to shop at Chiasso or Lugano and to tuck a little money away in Switzerland, have disappeared, to be replaced by middle-aged Germans, rededicating the charms of the Ticino.

Sig. Fausto Bernasconi, Mayor of Chiasso, says the Town Hall had recently bought a plot of land for SwFr 380,000, a square metre which had been offered at the time of the boom in the early seventies for SwFr 700.

But the most visible sign has come from Italy's parallel foreign exchange market, which is simply another name for the black market. The parallel market, whose rates are quoted daily in the Italian Press, has traditionally been a useful political and economic indicator and a standard measure of illegal capital outflows from Italy.

Apart from the odd occasion when there have been rumours of a possible official lira devaluation, or at times of heavy political tensions in Italy, the difference between the illegal rate and the official exchange rate has been slim by any standards.

It moved only marginally during the recent rapid resolved Government crisis, and at Chiasso this weekend the lira rate against the U.S. dollar was 899/813 compared to the official rate of 875.

The Credit Suisse scandal involved some SwFr 2.17 bn (\$543m) of clients' funds, improperly channelled to a Liechtenstein company, which eventually led to the withdrawal of SwFr 1.2bn in the 1977 accounts of the Swiss bank.

Unusually, it caused a major shock, but it would be misleading to blame the affair for the down-turn in business in the area.

Indeed, a local banker claimed the affair had led to a significant improvement of banking in the Lugano area, helping to rebuild substantial clients' confidence in the local banking system.

The main reason why Italian business has dropped are due to a combination of factors. A battery of new and reinforced laws against the illegal export of lira has helped reduce the flow of Italian funds to the Ticino, while an amnesty aimed to attract back to Italy a small portion of the money which had taken flight during the past two decades.

Suitcase traffic

At the Chiasso border, Italian fiscal police have also stepped up their search for smuggled currency.

The credit squeeze in Italy has reduced capital outflows significantly too. The lire as another Lugano banker pointed out, is no longer overvalued as it was at the time of the boom.

The suitcase traffic continues, of course, although in no spectacular way. In turn, the lire are recycled back either by tourists, who earned Italy a record 1.6,500bn in foreign exchange last year, or by the 25,000 Italians who cross the border to work in Switzerland every day.

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Oil high on Venezuela leader's Paris agenda

BY TERRY DODSWORTH IN PARIS

THE DEVELOPMENT of Franco-Venezuelan co-operation in the oil industry will be one of the main subjects under discussion in the four-day official visit of Sr. Luis Herrera Campins the Venezuelan President, which started in Paris yesterday.

Sr. Herrera's visit follows a recent trip to Venezuela by M. Andre Giraud, the French Industry Minister, in which the Venezuelan authorities held out strong hopes of a rapid acceleration in oil sales to France.

Both sides favour Govern-

ment-to-Government deals in order to step up the present rate of Venezuelan sales, which amount to less than 1 per cent of France's total annual oil imports of 100m tonnes. The French would also like to see any deal on oil supplies tied in with technical co-operation in the development of the Venezuelan heavy oil field on the River Orinoco.

French companies have already concluded several agreements on research and development projects for the exploitation of these reserves,

the most important of these contracts being for an experimental treatment plant to be built by the Institut Français du Pétrole, a Government-funded research organisation, and two nationalised oil companies, Elf Aquitaine and VFP.

French trade with Venezuela is currently in surplus. Exports last year amounted to FF1.12bn (£124m) against imports of FF1.87m (£92.7m). But industry is concerned by the stagnation of orders following a series of big contract such as

the first stage of the Caracas underground railway system.

In the course of his visit, President Herrera will see President Giscard d'Estaing, M. Raymond Barre, the Prime Minister, and M. Jean Francois Poncet, the Foreign Minister.

On Thursday the Venezuelan President will deliver a speech to the European Parliament in Strasbourg in his capacity as a delegate from the Andean Pact countries, which are due to review their agreements with the EEG in the near future.

Poniatowski scorns impeachment calls

BY DAVID WHITE IN PARIS

THE FORMER French Interior Minister and close associate of President Giscard d'Estaing, M. Michel Poniatowski, yesterday fought furiously against suggestions that he should be impeached over the de Broglie murder scandal.

The French Communist Party has called for M. Poniatowski to be brought before a parliamentary court following this month's newspaper allegations that he knew beforehand that Prince de Broglie, the former Junior Minister shot in 1976, was to be killed, and that the relevant police reports were later suppressed.

Senior members of the Socialist party have also been pressing for a trial.

M. Poniatowski, repeating his denial that he knew about the murder plot, accused both parties of reaching "ineffable summits of foolishness and dishonesty."

The de Broglie affair, revived after three years of legal

inquiry, has caused a big public stir in France, coming after a series of other scandals which emerged belatedly in the columns of the weekly newspaper Le Canard Enchaîné.

The Communist Party has only recently taken a strong line on the Government scandals, with its own leader, M. Georges Marchais, under attack over alleged gaps in his early career record. M. Poniatowski accused the Communists of trying to draw attention from the Marchais controversy.

The Communist and Socialist move is considered unlikely to result in the impeachment of M. Poniatowski. Bringing a member of Government before a "high court" of MPs and Senators requires an absolute majority in both houses of Parliament. The high court provided for in France's 1958 constitution has met only once, in 1960, when a member of the wartime Vichy regime was tried and banished.

France formulates a shares handout

BY OUR PARIS STAFF

THE TWO parties in the ruling French parliamentary coalition have come to an agreement on new measures which should give an important stimulus to worker participation in the ownership of French industry.

The deal between the two parties has been reached after the intervention of M. Raymond Barr, the Prime Minister, in a bid to avoid further confrontations between his Government and the Gaullist RPR party. Participation is one of the subjects closest to the heart of the Gaullists, who late last year launched a series of attacks on the Government's Budget proposals.

The main opposition parties, the Communists and the Socialists, have made it clear that they will not support the proposals when they come up for debate in Parliament this week. But the measures have attracted the support of the powerful Employers' Association which has been cautious in

adopting previous Government proposals on participation.

Under the proposals all companies, both quoted and unquoted, are to be given the option of distributing a minimum of 3 per cent of their capital to employees with the help of a 65 per cent loan from the State.

For public quoted companies, the decision on distributing the shares will have to be taken within three months of the introduction of the law. Unquoted companies will have up to two years to decide.

The project represents a considerable compromise on the Government's original proposals of 1978, which had to wait until now for a Parliamentary airing. At that time, the Labour Ministry was aiming to make share distribution obligatory, but only apply the handout to public companies.

Employees' shareholdings are widespread in the national sector

Poland warms to European Communists

By Christopher Bobinski in Warsaw

THE EASTERN Bloc Communist parties are still hoping to coax the Italian and other Western parties into coming to an all-European Communist meeting in Paris at the end of this month. A conciliatory editorial in the leading Polish party paper Trybuna Ludu yesterday urged that "Communists should meet and talk with each other."

The Polish and French Communist parties are the sponsors of the meeting which, by implication, would set the movement's seal of approval on the Soviet invasion of Afghanistan.

The Polish editorial comes as Sig. Enrico Berlinguer, the Italian Communist leader, starts a ten day visit to China which is certain to ruffle Soviet sensibilities. But Trybuna Ludu repeats none of the criticism of the Italians which has recently appeared in the Soviet Press.

Instead the paper sets out to calm Euro-Communist fears. It admits that there are "differences of opinion between the parties" and, in a clear reference to Soviet claims to primacy, asserts that "there is no least 'centre' in the movement, nor is such a thing possible."

The building industry is already concerned that activity in the domestic market will begin to slacken later this year as companies steadily reduce the high order books built up last year. But, according to the latest figures released by the West German Building Industry Federation, orders are also falling from overseas markets. Last year new orders taken by the construction industry abroad

Top E. German official for talks in Bonn

BY LESLIE COLTITT IN BERLIN

EAST AND West Germany are setting the stage for closer economic relations with the arrival tomorrow of the highest-ranking East German official to visit West Germany since 1970.

Later this month Bonn and East Berlin will sign an agreement which West Berlin's road, rail and canal links with West Germany across East Germany will be improved at a cost to Bonn of some DM300m.

Herr Guenter Mittag, the East German Politburo Secretary responsible for the economy, is returning a visit made last year to the Leipzig Trade Fair by Gunt Otto Lambsdorff, West Germany's Economics Minister. Herr Mittag, who is the chief economic adviser to President Erich Honecker, will attend the Hannover Fair and then go to Bonn for further talks with

Gunt Otto Lambsdorff.

He is expected to confer with Chancellor Helmut Schmidt who was to have held talks in East Germany earlier this year with President Honecker. Both sides had to postpone the meeting, however, in the wake of the Soviet invasion of the Soviet occupation of Afghanistan.

One of the main subjects to be discussed by Herr Mittag and Count Lambsdorff will be West Germany's annual DM350m (\$200m) "swing" trade credit to East Germany to facilitate their barter-like exchange of goods. The interest-free line of credit allows East Germany to buy West German goods worth DM350m more than it sells to West Germany within a one-year period.

The agreement runs out at the end of next year and East Germany puts great store in its

renewal as it can obtain West German products without having to spend scarce hard currency.

Bonn, for its part, is interested in industrial co-operation agreements between companies in each country which would turn West German products would be turned out in East Germany and sold in both countries, as well as in other markets. Herr Mittag is to visit both the Hoechst and Krupp companies in West Germany which have completed large investment projects in East Germany.

A high-ranking French government official is in East Berlin, meanwhile, to display French interest in expanding rapidly growing trade with East Germany.

Herr Guenter Gaus, West Germany's permanent represen-

tative in East Berlin, is preparing to sign a series of agreements with East Germany to improve West Berlin's physical ties with West Germany while modernising East Germany's infrastructure in the process.

Railway travel between West Berlin and Hainstedt, West Germany, 110 miles away, is to be speeded up by the laying of new track parallel to the existing line. Barge traffic to West Berlin is to be improved by widening and dredging the canals leading across East Germany. A missing autobahn link between Eisenach, East Germany, and Herleshausen, West Germany, is to be completed at a cost of West Germany of DM250m for 8.5 kilometres of road that remained uncompleted in 1936 when autobahn construction was halted.

The industry is also running into problems in certain countries, especially Mexico and Nigeria, where it is having to accept a minority interest in a locally established company as the price of gaining orders. At the same time, the West German parent companies are bailing to take on the majority of the responsibility

the past—but is willing to consider such schemes if they are related to specific projects.

Hitherto, the Bonn Government has shown itself more enthusiastic about such co-operation with East Bloc countries than the individual construction companies themselves.

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W. German builders fear for foreign orders

BY KEVIN DONE IN FRANKFURT

WEST GERMANY'S building industry has begun a series of talks with the Federal Government to try to persuade it to lend greater support to the industry's faltering sales drive in foreign markets.

The building industry is already concerned that activity in the domestic market will begin to slacken later this year as companies steadily reduce the high order books built up last year. But, according to the latest figures released by the West German Building Industry Federation, orders are also falling from overseas markets. Last year new orders taken by the construction industry abroad

totalled just over DM 7bn (£1.68bn), a sharp fall from the previous year, when foreign orders worth DM 9.7bn (£2.3bn) were placed with West German contractors.

Equally, the industry has had little success in spreading its sales efforts to other countries. It is still heavily dependent on Saudi Arabia which last year accounted alone for more than 70 per cent of the new orders. Also more than 90 per cent of foreign orders were concentrated within member states of the Organisation of Petroleum Exporting Countries.

Demand in most OPEC countries is falling, however,

according to the industry federation. In addition, companies are facing stiffer competition from the growing number of low-cost countries seeking construction work in the OPEC states.

The West German construction industry is concerned about the inevitable slowing-down of demand from Saudi Arabia, but is hoping to find replacement orders above all in Nigeria, Iraq and eventually again in Iran.

It remains sceptical about entering joint ventures with East European construction companies in third countries—several have been suggested in

the past—but is willing to consider such schemes if they are related to specific projects.

Hitherto, the Bonn Government has shown itself more enthusiastic about such co-operation with East Bloc countries than the individual construction companies themselves.

The industry is also running into problems in certain countries, especially Mexico and Nigeria, where it is having to accept a minority interest in a locally established company as the price of gaining orders. At the same time, the West German parent companies are bailing to take on the majority of the responsibility

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Sr. Sa Carneiro: first trip as Premier

Sa Carneiro on tour of European capitals

BY JIMMY BURNS IN LISBON

PORTUGAL'S Prime Minister, Sr. Francisco Sa Carneiro, travelled to Bonn over the weekend on the first stage of a tour of major European capitals.

The two-day visit to West Germany, the first trip abroad by Sr. Sa Carneiro since becoming Prime Minister in January, forms part of a major diplomatic offensive aimed at calming fears of fresh political instability in Portugal ahead of the new elections in October.

The Portuguese Government wants to underline its firm attachment to the NATO alliance and smooth the way

for Portugal's entry into the EEG.

Sr. Sa Carneiro was accompanied by Sr. Diego Freitas do Amaral, his Foreign Minister. He was also accompanied by Portugal's chief EEG negotiator, during the visit, the Portuguese team will meet Chancellor Helmut Schmidt and other leading West German officials, including Herr Hans Dietrich Genscher, West German Foreign Minister.

West Germany has recently increased its armaments aid to Portugal as part of the West's overall strategy of strengthening

NATO's southern flank after the Soviet invasion of Afghanistan. Last month, the West German Defence Ministry agreed to supply free 12 G-91 fighters, worth about DM 360,000 (\$85.715) each.

Also high on the agenda will be problems involving Portugal's entry into the Community in 1983. The most immediate issue is pre-accession aid which the EEG Council of Ministers is expected to discuss before the end of May.

Sr. Sa Carneiro wants to get the support of West Germany

for new provisions in the Community budget. In the third week of May he will travel to London for what will undoubtedly be a more delicate discussion.

The Portuguese are reported to have asked for about 250m units of Account in pre-accession aid. This would be spread over three years and cover three main areas: infrastructure, agriculture, and medium and small industries.

The Portuguese government wants to dissuade member states from pressing for a long transition period.

Begin determined to resist U.S. 'autonomy' pressure

BY DAVID LENNON IN TEL AVIV

ISRAEL'S Prime Minister, Mr. Menachem Begin, flew to Washington yesterday, determined to resist pressure from President Jimmy Carter to make major concessions on the deadlocked Palestinian issue.

Israel is apprehensive that the American leader reached agreement with President Anwar Sadat during his Washington visit last week, to press Jerusalem to grant a greater degree of freedom to the Palestinians than envisaged in the original Israeli proposal for limited autonomy for the occupied West Bank and Gaza Strip.

The ever-optimistic Mr. Begin said in a departure statement that he was confident that agreement could be reached on autonomy during his talks.

"provided everybody remained faithful to the Camp David Accords."

However, the problem is that Egypt and Israel have vastly differing interpretations of the Camp David provisions on the future of the Palestinians. Despite 10 months of negotiations, there has been no progress on narrowing the gap between the two positions.

The major points of contention between Israel and the U.S. are likely to be the Israeli settlement policy on the West Bank and the future of Arab East Jerusalem which Israel annexed in 1967.

Mr. Begin has pressed ahead with the settlement programme despite American and Egyptian

condemnation, and his entire Cabinet is opposed to any concessions on East Jerusalem.

The Israeli Premier is accompanied by his Foreign Minister and the Interior Minister who has headed the autonomy negotiating team. The presence of these two Ministers may enable Mr. Begin to take immediate decisions in Washington rather than insisting, as in the past, that everything has first to be referred back to the full Cabinet.

This could prove very important as the May 26 deadline for completing the negotiations on autonomy is unlikely to be extended by the Egyptians unless there is some indication of movement by the Israelis during the Washington talks.

Algeria and Libya 'to ban oil' for Israel allies

By Patrick Cockburn

LIBYA and Algeria have agreed to impose a ban on the sale of oil and gas to any country supporting Israel, a Libyan spokesman said in Tripoli yesterday.

Both countries are attending a meeting of the hard-line Arab Steadfastness Front which is strongly opposed to Egypt's treaty with Israel.

Despite the Libyan threat it appears that no details of the boycott have been worked out and Algeria wants to be compensated by Libya for any financial losses it might suffer because of a boycott.

Doubts about the reality of the proposed boycott are increased by Libya's reputation for verbal militancy. Last year Col. Muammar Gaddafi, the Libyan leader, threatened to cut off oil supplies to the U.S., but subsequently assured Washington that sales would continue.

Libya has already cut its output of oil by 350,000 barrels a day to 1.75m b/d from April 1. The operators were then told that the cut-back was for technical reasons.

Other economic weapons discussed by the conference, which ends today, include the withdrawal of deposits from U.S. banks, but such moves will be left to the discretion of the countries concerned.

Diplomatic relations may also be cut with Sudan, Somalia and Oman, all of whom are sympathetic towards Egypt.

Libya has stopped issuing visas to British citizens. The move follows the detention of four Libyan students by police in London over the weekend.

They are being interviewed in conjunction with the shooting of Mr. Mohammed Mustafa Ramadan, a Libyan journalist, outside the Regent's Park mosque last Friday.

NEW FEARS OF UPHEAVAL IN NORTH AFRICA

Power vacuum develops in Tunisia

BY SUSAN MORGAN AND FRANCIS GHILES

TUNISIA today is a profoundly worried country. Late in January the southern Tunisian town of Gafsa was raided by Libyan-backed dissidents. A few weeks later, Tunisia's Prime Minister for the past decade, Mr. Hedi Nouri, was suddenly incapacitated by a stroke.

Tunisia's continued stability matters to the west because it is a moderate state sandwiched between two leading radical powers, Libya and Algeria. Politically and culturally its large middle class has looked to Washington and Paris, and has adopted a flexible attitude towards Israel.

For weeks after the Gafsa raid the official Tunisian Press claimed that the West would stand by Tunisia in case of further threats. But, as one exile minister pointed out, "We are living in 1980, not 1960. Sending in the Marines could provoke violent reactions in this country."

Unfortunate

Gaddafi is not popular in Tunisia but while he may have failed to topple the regime, he has succeeded in creating a profound atmosphere of uncertainty.

Mr. Nouri's illness raises major questions about the country's future. In theory Mr. Nouri who is 68, remains both Premier and President. Bourguiba's successor but he is unlikely to make a comeback to political life.

This is an unfortunate moment for a power vacuum to develop at the top. President Bourguiba, now 76 years old, has in the past taken care to remove any ministers who became too powerful and whom he believed might pose a threat to himself or his chosen dauphin.

The prompt appointment of the Education Minister, Mr. Mohammed M'zali to replace

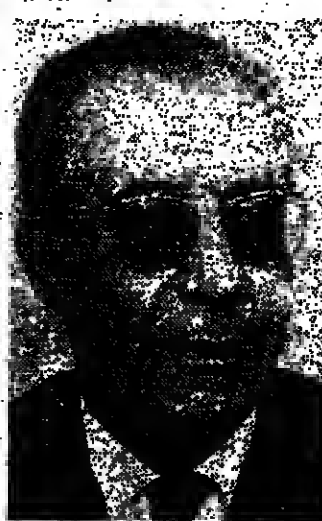
temporarily Mr. Nouri and act as Government co-ordinator will ensure the day to day running of the country for the time being. Whether he becomes Mr. Nouri's successor is still in doubt, but he would most certainly be the more popular choice.

Only two ministers, Mr. M'zali and Mr. Mohammed Sayah, head of the ruling Neo Destour Party, are full blooded politicians. The rest are mainly technocrats who, like the Minister of Energy, Mr. Hourou, are extremely competent, or businessmen, some of the latter showing greater enthusiasm for running their own businesses than for administering their departments.

From abroad, the impression is that the Gafsa attack brought some political dividends for the regime. The Tunisian populace dislike Libyan involvement and opposition groups publicly rallied to the government in the name of national unity. Well known ex-ministers such as Beji Caid es Sahel, Hassib Ben Amar and Ahmed Mestiri were invited to rejoin the ruling party from which they had been thrown out nearly 10 years ago because of their refusal to lobby to the President.

This conciliatory gesture is welcomed by all in Tunisia but Ahmed Mestiri, one of Tunisia's most respected politicians, stresses that many changes would have to be made before he could accept office again.

Mr. Mestiri points to the danger that sentiments of national unity will dissipate unless badly needed reforms are made. Frustrations felt by ordinary Tunisians could well lead to a further revolt. Nobody in Tunisia has forgotten the bloody riots which followed the general strike in January 1978. Eight executive members of the trade union federation which led the strike were conditionally freed from jail on March 20, but six are still imprisoned. Habib



Mr. Hedi Nouri: Unlikely to make a comeback

Achour, the most powerful trade union leader, who was serving a ten year sentence, has now been allowed return to his home.

The situation is further complicated by a dull economic outlook: stagnation in agriculture, not helped by the drought this past winter, and the very fragile nature of industrial development built up since 1972. The growing disparity in wealth is another subject of concern, to be underlined in a forthcoming World Bank report on the country.

Death sentence

Last week 15 of the "Libyan mercenaries" as the Tunisian authorities call the raiders, were sentenced to death. Half of the 60 odd people being tried for their part in the Gafsa raid were locals. Another 200 from the area are believed to have been arrested and will be tried later.

Gafsa itself is not entirely typical of Tunisia. Its inhabitants are mainly Berber while most Tunisians are Arab. This is traditional "siba" territory where the authority of central government is not easy to maintain. The tacit complicity of some of the townspeople in the raid is worrying for the government, as is the discovery of a number of arms hidden around Gafsa in the countryside.

Local phosphate mine workers are poorly paid and deprived of their union leaders since the bloody riots in 1978. Local complicity is underlined by the fact that 28 members of the raiding party lived for three weeks in a house in Gafsa which is only a stone's throw from the governor's own residence.

So far, the Government's reaction to the threat of destabilisation has been to lobby Western support. Habib Bourguiba Junior, son of the President, completed a whistle stop tour for this purpose to Paris, Washington and London—and to step up arms purchases to beef up their own totally inadequate equipment.

The U.S. is sufficiently alarmed at the prospects of an unstable Tunisia to send in heavy arms for the first time while Tunis is believed to have asked France for weapons worth \$400m.

The lobbying for support in the West and the strong denunciation of Colonel Gaddafi do not provide a long term solution to the problems Tunisia faces.

Were the Government led by a real politician, such as Mr. M'zali, Mr. Sayah or Mr. Mestiri, Tunisians could look to their government and feel secure—whatever the threat from Tripoli. Unfortunately they cannot. The sticking-point is, still President Bourguiba himself; he is the best guarantee of stability of the system he has created yet his general opposition to change makes its long term survival more dubious.

Knife hurled at Mrs. Gandhi

NEW DELHI—A long-haired man hurled a knife at Mrs. Indira Gandhi, Prime Minister of India, yesterday, in an apparent attempt on her life, police said.

Mrs. Gandhi was walking to her car after attending a function at Parliament House when the unsuccessful attack took place.

Police said the spring-blade knife, with a five-inch blade, was thrown two yards away, but missed Mrs. Gandhi and hit a security officer on the shoulder without injuring him.

The man, named as Ram Bhai Chaudhary, 37, was overpowered and taken to a police station where a case of attempted murder was registered against him.

There was no immediate indication of any political or religious motive for the attack, police said. They were still questioning the man and did not say when he would appear in court. Reuter

S. Africa could impose new curbs on Press

BY QUENTIN PEEL IN JOHANNESBURG

NEW RESTRICTIONS should be introduced on publication of details of acts of political violence, and the manufacture of arms in South Africa, a Government-appointed inquiry proposed yesterday.

Legislation should also be introduced to monitor the activities of foreign Governments in collecting information and publishing propaganda about South Africa, it added.

But greater freedom of Press reporting of day-to-day military matters, and a review of the South African Official Secrets Act to limit its scope, were proposed by the Commission of Inquiry headed by Judge Martinus Steyn, the former Administrator-General of Namibia (South-West Africa).

Judge Steyn was appointed to investigate relations between

the South African security forces—both the military and the police—and the Press, reporting in South Africa on a whole range of subjects, including defence, arms supplies, atomic energy, oil supplies, and "strategic" economic activities, are already subject to sweeping censorship under existing legislation.

Further legislation to control publication of stories about the defence force—including issues such as conscientious objection, maladministration and neglect—would be counter-productive, Judge Steyn declared.

However, he proposed that the system of accreditation of journalists should be more strictly applied, and that foreign correspondents should be subject to a more rigorous registration procedure.

Gen. Chon takes over South Korea's 'CIA'

By Ron Richardson in Seoul

THE SOUTH Korean Government yesterday announced the appointment of Lt-Gen. Chon Doo Hwan as acting head of the powerful Korean Central Intelligence Agency.

Gen. Chon, 48, who was leader of a group of younger generals who on December 16 arrested the then-army chief of staff and overthrew the existing Military High Command, will also retain his post as head of the Defence Security Command, which maintains an internal intelligence watch over the South Korean Army.

Gen. Chon headed the team which investigated the assassination of President Park Chung Hee last October by the then-KCIA director, Kim Jae Kwi, now under sentence of death.

"The general's appointment was made in the interests of improved efficiency," the Government said. But observers point out that his assumption of power in the intelligence agency will inevitably involve him in the civilian political situation.

Since the "coup" within the army High Command in October, the military has gone out of its way to maintain an apolitical stance.

Iraq raises commitment to Arab Monetary Fund

BY KATHLEEN BISHTAWI IN DUBAI

THE Arab Monetary Fund—the Arab equivalent of the IMF—has decided to increase its authorised capital by about \$50m to \$1.1bn, with the increase being entirely provided by Iraq.

The fund's annual report for 1979, which was presented at a meeting of its board in Abu Dhabi at the weekend showed that the paid-up capital of the organisation had increased to \$463m from \$261m in the previous year. Of the present loans extended, which total

\$69m, over two-thirds have gone in automatic loans which member states can draw upon once having paid their dues.

The bulk of the extended loans have gone to Sudan, though the fund has also lent to Mauritania, Morocco and Egypt. Egypt is presently suspended from the organisation, but is reportedly paying back on a regular basis the \$16m it took from the fund. A further loan for Mauritania is under consideration, say officials.

Australia's exports thrive

BY PATRICIA NEWBY IN CANBERRA

THE EXPORT boom which Australia has been enjoying over the past year continued in March, according to figures issued yesterday by the Bureau of Statistics.

The first nine months of the Australian financial year which runs from July to June showed a 38.3 per cent increase in exports on the same period the previous year. Imports for the first nine months of this financial year have risen by 20.3 per

cent compared with the same period in 1978-79.

An excess of exports over imports of A\$278m (£139m) last month brought the cumulative excess for the nine months to A\$1.9bn.

High commodities prices and a boost for manufactured exports caused by a decline in the Australian dollar in line with the U.S. dollar are generally believed to be behind the export success.

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Summary of the report for the year ended 31 January 1980.

- Net asset value per equity share at 31 January 1980 was 65.3p compared with 60.6p last year.
- The directors recommend total dividends per equity share of 1.85p compared with 1.55p last year.
- The North American emphasis of the portfolio, which had become reduced in percentage terms following the dismantling of exchange controls, was restored by a shift of approximately £4 million from sterling to dollar investments.
- The company's commitment to the oil and oil service sectors was increased substantially during the year, partly due to the appreciation in market value of the investment in The Edinburgh Securities Company Limited, which has interests in small oil exploration and production companies as well as direct participations in oil and gas exploration.
- The principal policy objectives of the company are
 - (i) Emphasis on investment in North America.
 - (ii) The provision to shareholders of long-term growth of income.
 - (iii) Readiness to have sizeable commitments in small or unquoted companies where there are grounds for confidence in long-term prospects.

Copies of the report and accounts may be obtained from the managers and secretaries, Edinburgh Fund Managers Ltd., at 4 Melville Crescent, Edinburgh EH3 7JB, where the annual general meeting will be held on Tuesday, 6 May 1980, at 12.15 p.m.

THE IRAN CRISIS

Concern on oil exports boosts spot market

By Ray Daffer, Energy Editor

UNCERTAINTIES about supplies of crude oil and refined products exported from Iran have caused a mild resurgence in activity in the long-depressed international spot markets.

Traders in Singapore reported growing concern about the availability of Iranian oil products, particularly fuel oil and naphtha. One trader called the Iranian situation "increasingly precarious."

He said that Iran, citing force majeure, had cut the naphtha of at least one major international company. Cuts were expected to be enforced against others as well.

Any further disruption in the international oil market could hit Japan particularly hard. Industry estimates show that Japanese oil companies and trading houses obtained 2.68m barrels of spot crude oil in February, around 40 per cent of the world spot market.

In Tehran Mr. Ali Akbar Wolifar, the Iranian Oil Minister, said that the country's output would be nearly 500,000 barrels a day (b/d) lower in the Persian year which started recently than in the one just past. He said that output would not exceed the present rate of 3m b/d. (Unofficial reports have suggested that Iran's current production rate is considerably lower than that.)

Mr. Wolifar told the official Pars news agency that oil production in the year ended March 20 averaged 3.47m b/d. Venezuela, another member of the Organisation of Petroleum Exporting Countries which is cutting its output, reduced daily production level to an average of 1.91m in the first quarter of this year.

Europeans convinced of need for strong measures

BY OUR FOREIGN STAFF

PRESIDENT CARTER'S television appeal for greater support from his European allies appeared yesterday to be galvanising them into treating U.S. requests for aid against Iran with a greater sense of urgency. The EEC countries remain divided however about the extent, or even the advisability, of planned economic and diplomatic sanctions.

All the EEC countries have expressed the desire to show solidarity with the U.S. The hardest line support of President Carter came in London, but Mrs. Margaret Thatcher, the Prime Minister, said there would be no action until the EEC

Foreign Ministers meeting on April 21. The impact of President Carter's plea, broadcast on television in the four largest EEC countries has been reduced by confusion over whether he intended to deliver an ultimatum to his allies. All the EEC countries say that they have been given no deadline for action.

Military

The general consensus of European opinion seems to be that some strong measures must be taken against Iran if only to prevent the U.S. from moving towards the military option as threatened by President Carter. But there are grave doubts

that such measures will assist in the release of the hostages and fears that they will drive Iran increasingly to rely upon the Soviet Union. A cut off of Iranian oil could once again send prices on the market spiralling upwards.

In France, in particular, President Carter's broadcast received cold response. Though no official statement on the subject has been issued by either the French President's office or the Foreign Ministry, on the grounds that France did not want to get involved in "politics" with the U.S., French officials were clearly irritated by what they considered to be the peremptory tone adopted by President Carter.

The French Government,

which is clearly opposed both to the breaking off of diplomatic relations with Iran, and the adoption of economic sanctions, continues to insist that only co-ordinated steps by the EEC countries would serve any useful purpose.

Impatience

While some French newspapers expressed understanding of President Carter's impatience with the failure of the European countries to back U.S. policy towards Iran, Foreign Ministry officials professed surprise at what they considered to be the U.S. President's "unfair" criticism.

They stressed that the EEC countries had not only voted in

the United Nations for a proposed economic sanctions resolution, but had made a joint diplomatic demarche calling for the release of the American hostages. It was not the Europeans' fault that the Soviet Union had vetoed the UN resolution, they said.

In Italy Sig. Lello Lagorio, the new Defence Minister and a member of the Socialist Party, emphasised his opposition to forceful retaliatory measures in Iran. In his first public statement on the Iranian crisis, the Minister said he agreed with the opinions of Chancellor Helmut Schmidt of West Germany, and that "at this stage we must strive for peace to avert a repetition of the events at Sarajevo or at Danzig."

The Minister also indicated

President Carter's current hard-line approach and the growing anger of Americans could lead "to the U.S. resorting to a policy of isolation which could eventually lead to a break between America and its European allies."

Hard line

The Minister's statement is evidence of Italy's intentions of attempting to seek an alternative solution to the Iranian crisis. Officials here have suggested the new Italian Government would seek to promote a joint European initiative following up the recent meeting of EEC member state ambassadors in Tehran with the Iranian President.

Red Cross visits embassy hostages

By Simon Henderson in Tehran

TWO representatives of the International Red Cross went into the U.S. Embassy in Tehran yesterday to see the diplomatic hostages held there.

The visit, made along with the Iranian Minister of Health, was in accordance with Ayatollah Khomeini's ruling that although the new Parliament would decide the hostages' future, visits to them would be allowed until then.

The visit is significant because no non-Iranian has seen all the hostages since the embassy was seized last November. Washington has been showing special concern for about seven of them, believed to be officers of the Central Intelligence Agency who it is feared may have been mistreated. Two of the other hostages are women.

It was not clear before the meeting whether the Red Cross conditions for visits, including private interviews in the room where detainees live, had been met.

The Red Cross delegates—the Tehran representative and a doctor who flew out specially from Switzerland—refused to make any statement as they went inside, and were not expected to answer questions later. They were also accompanied by a representative of the Iranian Red Crescent Society.

Ship delay sought

A TOKYO MP, Mr. Michael Grylls, has said delivery should be stopped of the 40m-ton supply ship which Swan Hunter shipbuilders are building for the Iranian Navy, our correspondent writes. But a spokesman for Swan Hunter said: "The vessel is now complete, and we are currently having the normal discussions with the owners." The 20,000-tonne Kharz was ordered by the Shah of Iran before he was deposed.

Iraqi border calm as refugee numbers grow

BY SIMON HENDERSON, RECENTLY ON THE IRAQI-IRAN BORDER

ON THE Iranian border with Iraq there were surprisingly few signs last weekend of the intermittent skirmishing between the two countries which has gone on over the past week.

The main border crossing point at Qasr-e-Shirin east of Baghdad was still officially open, though even in normal times little traffic uses it. Reports in Iran said both sides had been using heavy artillery in this sector on Friday, but when visited on Saturday, soldiers at the gendarmarie post said there had been no trouble there recently and no activity whatsoever.

It is in this area over the past week that the Iraqi Government has been expelling increasing numbers of Iraqi Shi'ites, many of whom have

Iraqi identity cards and are out—as Baghdad claims—Iranian citizens.

They include some 1,000 businessmen, many still inconspicuously dressed in business suits and looking extremely wealthy. They say they were tricked into attending a meeting at the Ministry of Commerce in Baghdad and were then unceremoniously taken to the border under guard.

Most say they want to return to Baghdad and that their families do not know what has happened to them or where they are.

Despite the two countries' war words, there were no checkpoints stopping traffic on its 11-hour road journey from Tehran to the border.

Tanks at an army base at Kermanshah, three hours from



the border, were distributed around the football pitch under camouflage netting, but other army camps showed no special alertness. A mile or so from the border about 20 Iranian M-40 tanks were drawn up in a field close to the road with their support vehicles. But no precautions were being taken against air or artillery attack.

The fighting which has taken place was said by soldiers to be about 20 miles to the north, further into the mountains of Kurdistan. There have also been some attacks by Iraqi "infiltrators" to the south.

Carter actions 'not tough enough'

BY JUREK MARTIN, U.S. EDITOR IN WASHINGTON

PRESIDENT JIMMY CARTER'S decision to tighten the screws on Iran and to try to insist on allied compliance with his tough approach reflects a deep, national frustration at the failure to secure the release of the diplomatic hostages in Tehran after more than five painful months.

This was graphically illustrated yesterday by a public opinion poll conducted for Newsweek magazine, which found that a majority of those surveyed believed that Mr. Carter had not been "tough enough" in the increased diplomatic and economic sanctions he announced last week.

Another poll reported that a majority of Americans would favour military action against Iran.

The Newsweek survey also detected a sharp drop in public confidence in the President's

handling of the Iranian crisis. Only 40 per cent approved his performance, while 48 per cent disapproved, a reversal of the findings of last December, when Mr. Carter enjoyed the support of 77 per cent.

These surveys do not mean that Mr. Carter is taking a tough stance because his own political future is in jeopardy. It would still require a complete collapse of his support for Senator Kennedy to defeat him in the Democratic Party's Presidential nomination, while there remains ample time to combat the challenge from the Republican party.

But they do demonstrate that it is hard for politicians, let alone a sitting President, to be indifferent to the public mood—and there is no doubt that national concern over the fate of the hostages is as intense as it was when they were seized last November.

Officials in Washington repeatedly argue that while the allies may have legitimate reasons for urging a continued policy of restraint on the Administration, they totally fail to understand the depth of emotion in this country. In turn, this sentiment makes it all the more difficult for Americans to understand allied reservations about employing coercion.

In the U.S. view, there is now little point in waiting for the convening of the new Iranian Parliament, because there is no guarantee that it will agree to negotiate the freedom of the hostages.

In spite of previously held reservations, the Administration is now insisting that coercion, or the threat of it, can work. If (and it is acknowledged to be a big "if") the allies go along, as Mr. Carter said last week, the "burden of sacrifice" has to be shared, among partners.

AMERICAN NEWS

U.S. steelworkers' wage negotiations enter final day

BY IAN HARGREAVES IN NEW YORK

NEGOTIATIONS for a three-year pay contract for the U.S. steel industry entered their final day yesterday with the two sides still differing on numerous issues of detail but apparently not too far apart on the main pay issue.

The negotiations, which are being closely watched as the first major pay settlement this year, must and by midnight tonight or go automatically to independent arbitration. There is no question of a national strike because of the six-year

agreement between the United Steelworkers and the big steel companies which bans a strike over the pay contract. One of the issues at stake in the talks, however, is whether this agreement can be sustained for future pay bargaining.

Some of the steel companies feel that they have been forced to pay too high a price for the agreement, in terms of guaranteed cost of living index pay increases and in fringe benefits. On the other hand, they fear that an end to the agreement

Response mixed over Olympics

By David Tonge

THE U.S. Olympic Committee's decision at the weekend to boycott the Moscow Olympics may affect West German and French participation in the Games, but it is not causing the British Olympic Committee to reconsider its decision to take part.

Athletes say the decision will also increase pressure on the International Olympic Committee to allow individual athletes to take part in the Games even when their own national committee is not doing so. This possibility has long been on the formal agenda of the meeting due next week in Lausanne.

Between the presidents of Western European Olympic Committees and Lord Killanin, the IOC President.

The Lausanne meeting will be followed by meetings of the IOC and international sports federations and of the IOC Executive Board. Any change in the Olympic movement's rules would require a postal vote of all members, and a change opening the games to individuals would probably have far-reaching consequences.

French sports officials expressed disappointment at the U.S. decision, saying that if the West Germans also withdrew it would make France's position very delicate. Herr Hans-Dietrich Genscher, the West German Foreign Minister, indicated yesterday that the Bonn Government would recommend the West German Olympic committee to boycott the Olympics, even though until now Herr Helmut Schmidt, the Chancellor, has been enthusiastic about the boycott.

Peru awaits Cubans' arrival

LIMA—The Peruvian Government said yesterday the first 500 of the thousands of Cubans seeking asylum in Peru's embassy in Havana will be flown here as soon as Cuba agrees, probably tomorrow. Peru has agreed to accept 1,000 of the 10,000 Cubans who crowded into the embassy grounds more than a week ago. A Peruvian Red Cross official said the organisation was preparing a 28-acre sports complex here as a refugee camp for the Cubans.

Agencies

Sharp cuts in air fares on Tokyo-Sydney route

BY CHARLES SMITH IN TOKYO

AFTER two years of discussion Australia and Japan have agreed to cut air fares on the prohibitively expensive Tokyo-Sydney air route. But Australia has simultaneously taken steps to discourage air travellers from stopping over in Japan on the way to Europe.

The agreement on Tokyo-Sydney fares, which takes effect on May 1, will make it possible for groups of 20 to 45 in off-season periods from Japan to Australia and back at a fare of ¥194,000 (£350). This is a cut of 60 per cent from the standard Tokyo-Sydney economy fare of ¥428,300.

Individual passengers flying in the off season will pay ¥235,000 on tickets bought 30 days in advance.

Japan Air Lines, which shares the Tokyo-Sydney route with Qantas, is about to launch a

¥81.5m advertising campaign to try to increase the flow of Japanese air travellers to Australia to 60,000 per year from the present level of around 45,000. The number of Australians who travelled by air to Japan in 1979 is estimated at only 25,000.

Coming at a time when airline operating costs are rising rapidly because of fuel costs, the cuts would appear more likely to benefit Japan Air Lines than Qantas. The scope for Japanese group travel to Australia is almost certainly greater than the other way about. To partially offset this situation Australia has introduced a new cut rate fare on the "eastern hemisphere" route to Europe which will penalise

Australian travellers flying to Europe via Japan.

The new fare is offered on flights via south-east Asia and the Middle East (a route covered by Qantas) but a 20 per cent surcharge is imposed for Australia-Europe flights through Tokyo. This is despite the fact that the Japan route from Australia to Europe is slightly shorter than the south-east Asia route. Qantas has no flights from Tokyo to Europe and consequently cannot offer a through service to passengers flying from Australia to Europe via Japan.

The Australian surcharge on stopovers in Japan has been the subject of a protest by Japan Air Lines and an enquiry to the Australian Ministry of Transport by the Japanese embassy in Canberra.

Tunisians award £30m harbour deal

By Charles Batchelor

In Amsterdam

HOLLANDSCHE BETON Groep (HBG) of the Netherlands, together with two foreign partners, has won a £1.140m (£30.5m) order to build a harbour at La Goulette in Tunisia.

HBG's share in the order placed by Tunisia's Office des Ports Nationaux, is worth £1.35m and will be carried out by Sodranord, a subsidiary of the company's Hollandische Aanneming Mij division. It will deepen and broaden the approach channel to the harbour and excavate a harbour basin as well as create new land by pumping sand up from the sea bed. The work is expected to take two years.

Meanwhile Rijn Scheepswerk, the shipbuilding and engineering group, said its Dutch division has won a £12.5m order from the Tunisian Ministry of Electricity, Air, Water Supply to design, build and install a steam production plant to be used to evaporate sea water.

Daf Trucks, the Dutch commercial vehicle manufacturer, has received an order worth £1.5m to deliver 14 trucks to a co-operative project in the north of Sudan. Most of the trucks, which have been financed by Dutch development aid, will be equipped as tankers to carry oil from the Port Sudan refinery to the Wad Numeiry Co-operative.

Kennedy wins unexpected victory

BY JUREK MARTIN, U.S. EDITOR IN WASHINGTON

SENATOR Edward Kennedy was heartened yesterday by his unexpected victory over President Jimmy Carter in the first stage of the Democratic Party caucuses in Arizona over the weekend.

"Jimmy Carter found there's a little cactus growing in the rose garden," Mr. Kennedy told a rally in Pennsylvania, where he is campaigning in advance of that state's crucial test next

Tuesday.

Mr. Jody Powell, the President's Press Secretary, admitted the Arizona result was a surprise. He attributed the outcome to the success the senator had in appealing to its Hispanic population among whom Mr. Cesar Chavez, the popular farm leader, worked hard for Mr. Kennedy.

But in other caucus proceedings across the country, the



Howard Jarvis... reform

Jaws II: Jarvis's new tax-cut plan

BY MAURICE IRVINE

HOWARD JARVIS is on the warpath again. Today is Tax Day, the deadline for filing state and federal income taxes across America, and the rumbustious author of Proposition 13 is kicking off a campaign for a new Californian referendum designed to cut the state's personal income tax rates in half.

"Turn Tax Day into Tax Protest Day" is the slogan of Mr. Jarvis, 76, who is spending \$60,000 for 30 minutes of prime-time television this evening to take his case to Californian voters. Most people here regard his battle as already won.

The new reform, Proposition 9—known as "Jaws II"—to its critics—is more potent even than "13," which slashed property taxes by 57 per cent and exported the tax revolt to the rest of the nation. Polls suggest that "9" will be approved next June 3, the day of the California Presidential primaries, by a margin of 2 to 1.

Its effect on the economy of the country's most populous state is, however, fiercely disputed. Jarvisites insist that Proposition 9 is a stimulant, an inflation-fighting measure which will simply "cut the fat from big Government."

The opposition, led by Governor Jerry Brown—zig-zagging away once more from fiscal conservatism—charges that Jarvis II, in reducing state revenues by as much as \$50m, will "devastate" public ser-

vice and benefit the wealthy while giving "crumbs" to the poor.

Mr. Brown, freshly returned from his unsuccessful attempt on the Democratic Presidential nomination, has appeared on television with an anguished plea to voters to remember that "your tax money supports the elderly, the disabled, the mentally retarded" and the colleges in which "dreams for the future are born."

He concluded with a quotation from St. Matthew ("In as much as you have done it to the least of these my brethren, you have done it unto me...").

In today's California, such protestations tend to fall on deaf ears. Most legislators, educators and others in State Government are against Proposition 9. But they are wary of assailing it as frantically as they did Proposition 13 two years ago.

"We lost our credibility when the fiscal chaos everyone was predicting from 13 failed to materialise," says State Senator Albert Rodda, who chairs the powerful Senate finance committee. That credibility went to Mr. Jarvis, who is these days often referred to as "the real ruler" of a state which boasts "the seventh most productive economy in the world."

Certainly scare tactics are out," agrees Professor David Saxon, president of the University of California. Professor Saxon nevertheless warns that

if "9" passes, his education budget could fall from its current \$906m to \$675m, forcing the University to charge tuition fees of \$1,000 a year or more for the first time in its 112-year history.

Prof. Saxon sent out letters to this effect to some 130,000 students. Mr. Jarvis promptly sued the University for illegal use of public funds.

If educators are leading the fight against "9," it is because they have most to lose, since education accounts for roughly half the general expenditures in California's budget.

Already Proposition 9 has obliged Mr. Brown to prepare not one but two budgets, the first a \$24bn spending plan which could eradicate what remains of the huge state surplus that existed before Proposition 13; the second a contingency scheme taking account of losses from Jarvis II and calling for across the board trimming of up to 30 per cent in some state agencies.

Hungarians seek better deal for exports

BY PAUL LENDVAL, RECENTLY IN BUDAPEST

HUNGARY needs quicker, better and more direct contacts with its major markets, according to Mr. Jenő Zanyi, financial and economic director of EGYT, Hungary's third largest pharmaceutical enterprise.

Summing up the conditions seen to be vital to the success of Hungary's new export strategy, he said the present system could not provide an optimal flow of information nor proper marketing of the country's products.

"Last but not least," he said, "the new price mechanism underlines the need for direct access to export markets, the more so since our interests do not necessarily always coincide with those of the foreign trade agencies."

EGYT, founded 60 years ago as a subsidiary of the Swiss Wander company, was nationalised and expanded after World War II. Today, with a staff of 4,000, 3,000 of whom are concentrated at its Budapest plant EGYT turns out a wide range of pharmaceuticals with a turnover of about \$160m (£73m).

Some 40 per cent of output is shipped to the Communist partners in Eastern Europe, 25 per cent is sold in the West and 35 per cent on the domestic market.

Since the beginning of the year EGYT has benefited from a 10 per cent turnover tax rebate as do all other concerns engaged in export to hard currency markets. Though the measure is welcomed by EGYT management, it is not yet a major stimulus. In cash terms, the rebate amounts at best to some 2,000 Forint (\$28) per annum per employee at a time when average monthly earnings are between Forint 3,500 (£48.5) to Forint 4,000 (£55.4).

As one of the major hard currency earners, the pharmaceutical industry is one of the branches most intimately affected by the decision to adapt domestic and producer prices to those ruling on world markets. Hungary is usually the world's twelfth largest pharmaceutical producer and the sixth to eighth in the world export league.

However, pharmaceutical

producers feel that for all its success, Medimpex, the foreign trade agency, is no longer the best tool to tap foreign markets. The five major companies, with a total labour force of some 16,000, have therefore asked if they may set up their own joint foreign trade outlet. It is hoped that this authority will be granted later this spring.

Meanwhile, Mr. Peter Veress, the foreign trade minister, has confirmed that the Government will generally broaden the state on which producers in all major export sectors will be able to deal directly with foreign business partners. In addition to the 35 specialised foreign trade agencies and nine state concerns who now act as agents, there is no longer a tiring trading and service companies at present engaged in direct foreign trade transactions.

The Government will also review the size of the export-import companies. Both the Minister and economic commentators emphasise that the

country needs such instruments which promote exports to the West, improve competitiveness, flexibility and efficiency and above all the "ability" of exporters to adapt themselves quickly to the steadily changing market conditions in the world.

Though the foreign trade balance improved last year, primarily due to a 28 per cent jump in sales to the West and a virtual freeze of imports, levels, no one in Budapest has any illusions that it will take anything less than four or five years to achieve real international competitiveness.

Not only does Hungary have to import "finished" materials but also half-finished products and components to maintain its high export levels. However, about half of these go to the Soviet Union and other East bloc countries and in intra-Comcon trade prices are more rigid and deliveries are laid down in advance. The more Hungary exports to the West, therefore, the more its basic balance of payments becomes in some key sectors.

Government pay bill will be 25% higher this year

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

THE CASH amount required for the central Government pay bill in the current financial year will be about 25 per cent higher than in 1979-80, a senior Treasury official told an all-party committee of MPs yesterday.

Mr. Robin Butler, an Under-Secretary responsible for expenditure, said this provision in the estimates takes account of the full year cost of the large staged pay rises for the civil services, the national health service and the armed forces agreed over the last year.

He was one of several officials giving evidence to the Treasury and Civil Service Select Committee during a morning hearing ahead of questioning of the Chancellor later in the afternoon.

Catching up

A number of MPs expressed concern about the size of the proposed increase. Mr. Edward du Cann, Conservative MP for Taunton and committee chairman, said the present system of estimates mopped up increases year by year. Parliament was not getting clear figures and there were open-ended commitments.

Mr. Butler said there were large catching up pay settlements during 1979-80 in central

Government — including the health services and armed forces.

Some were affected by the Clegg Comparability Commission awards. Several were implemented in stages, some at late as April 1, so the full cost will only be borne in 1980-81.

This "drift" accounts for a sizable part of the increase in the 1980-81 pay bill. The assumption is there will be a 14 per cent increase on top of the current bill, for settlements being negotiated.

Miss Patricia Brown, an Under-Secretary, reconciled this with reported wage rises of 18 to 19 per cent. She said the cash limits assumed a 24 per cent reduction in manpower costs and staged implementation of the awards.

Public sector wage costs would rise more rapidly in 1980-81 than prices in the economy as a whole. But cost rises should be less rapid for capital spending, the social security budget and procurement. This is known as the relative price effect.

The officials were pressed about North Sea revenue assumptions in the medium-term strategy.

Mr. Frank Cassell, an Under-Secretary concerned with medium-term strategy, said the Treasury was assuming an un-

changed world dollar oil price in real terms from now.

Mr. Cassell admitted that official projections erred "on the side of caution." At 1978-79 prices this revenue was estimated to rise from £700m in 1978-79 (of total taxes on income, expenditure and capital of £48.3bn), to £21bn in 1979-80 (£52bn); £21bn in 1980-81 (£52bn); £21bn in 1981-82 (£52bn); £21bn in 1982-83 (£54bn); and £21bn in 1983-84 (£55bn).

Controls

Questioned about the projected improvement in nationalised industry finance in the next few years, Mr. Butler said about 40 per cent of the turn-around by 1983-84 was expected to come from the reduction or elimination of losses in industries such as steel, shipbuilding and coal. About a quarter is expected to come from "economic pricing" in the energy industries.

Mr. Michael Bridgeman, an Under-Secretary concerned with monetary policy, agreed with City estimates that switching of lending outside the main monetary aggregates as a result of corset controls was probably "2 per cent or thereabouts." This is known as disintermediation and some may be reversed when the controls end in mid-June.

Mr. Bridgeman said an attempt would be made to identify this in the monthly money supply press releases to see the underlying trend.

In written evidence to the committee published yesterday, Mr. John Walker of the Economist Intelligence Unit suggests the public spending cuts may be both difficult to achieve and, in some cases, economically undesirable. The assumption of a sharp fall in wage inflation appears extremely optimistic.

Farmers urge action on dogs

STIFFER CONTROLS on dogs and their owners have been urged by Kent farmers angry at losing sheep through dog worrying.

The farmers want all dogs found straying to be impounded and slaughtered if unclaimed in seven days. They also demand that owners should have to take out third party insurance to cover damage done by their dogs.

Other suggestions discussed at a recent meeting of the Kent branch of the National Farmers' Union include fines for owners of straying dogs, presentation of a licence when buying a dog, increased licence fees, and compulsory collar identification.

Burmah to lead Gabon oil search

By Ray Deffer, Energy Editor

BURMAH OIL, the UK-based independent energy and industrial company, is to head an international group in the search for oil and gas off the coast of Gabon.

The group will conduct a major drilling programme over 2,300 square miles. The deal marks an important step in Burmah's intended expansion of oil exploration. Its current interests are centred on the North Sea and Pakistan.

It is understood Burmah also intends to lead two offshore consortia which will bid for new licence acreage in the UK North Sea and the English Channel.

The Gabon agreement involves six companies. Burmah, as operator, will have a 12 per cent stake in the new group. Agnif Petroleum of Gabon will hold the major stake with a 44 per cent interest.

Other interests are: Canada-based Hudbay Oil (Gabon) (11 per cent); Neste Oy, the state oil company of Finland (11 per cent); Norcen (Gabon) Oil and Gas, another Canada-based company (11 per cent); and OMV Aktiengesellschaft, the Austrian state oil company (11 per cent).

Early decision on air control radars

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

THE Civil Aviation Authority expects to decide this week which manufacturer will supply up to £25m worth of new radars for air traffic control in the UK from 1984 onwards.

The two companies mainly in the running are both foreign — Westinghouse from the U.S. and Signal, a subsidiary of the Dutch Philips Group. A joint bid from the GEC-Marconi and Plessey groups is not thought likely to be involved, although it is still possible that GEC-Marconi may submit a separate bid.

The CAA made it clear yesterday that, contrary to some reports, the decision had not yet been taken. But it would be based on technical merit first, and price second.

Efforts by MPs and trades unionists to try to prevent the order from going overseas appeared to be mounting yesterday. But it is understood that the Government has already studied the matter, and has decided that it must be left to the CAA to settle on its own judgment of the technical merits and prices of the various bids.

The CAA needs these large new radars from 1984 for installation on new sites in Yorkshire, Lincolnshire, Essex and Sussex, to monitor and track the growing volume of aircraft movements in the UK.

Existing radars have been in service for between 12 and 20 years, and are not only ageing,

but are less able to cope with the increasing volume of aircraft movements in UK airspace, already amounting to about 3,000 per hour in peak periods.

The new radars, with an effective range of 200 miles or so, will be required to track many more aircraft at a given time. They will feed information into the London Air Traffic Control Centre at West Drayton, near Heathrow.

The radars will combine primary and secondary functions that is, they will not only locate the aircraft precisely, but will be able by interpreting signals from the aircraft to identify who they are, and provide details of their height as well as direction, information which is vital for the controllers.

For this reason the radars must be technically highly advanced. It is the CAA's view that the Westinghouse and Signal radars, which are already used extensively in the U.S. and elsewhere, meet this criterion, whereas the UK submission does not.

The CAA's view is that it can get what it needs from the U.S. or Holland faster than from the UK. But it is still open to the Plessey-Marconi team to convince the Authority that it can meet the need, within the time required, at a price that is competitive, although this is a secondary requirement.

NatWest to take over Gillette Cup

Financial Times Reporter

THE National Westminster Bank is to take over the sponsorship of cricket's Gillette Cup for at least five years from next year. The inflation-proof contract is worth £250,000 in the first year, and the game could benefit over the first five years by more than £1.5m.

The competition will be known as the NatWest Bank Trophy.

The Gillette Company's decision not to renew after 18 years was expected, because the Gillette Cup had lost some of its original marketing impact. The last Gillette Cup final will take place this summer.

Gillette was the first big cricket sponsor in modern times. The original sponsorship was £8,300, a far cry from the £1m provided by major sponsors this year; but no one realised at the time how successful it would be.

NatWest should be able to contain a good return for its investment as the Gillette Cup has been the most exciting of all the domestic limited-over competitions.

The Test and County Cricket Board, while regretting the end of the long partnership with Gillette, welcomed the new sponsorship, particularly for the help it would give to county club finances.

Doubts about running of 'enterprise zones'

BY LORNE EARLING

THERE MAY be many difficulties in administration of the "enterprise zones" being set up by the Government, Mr. Joe Brown, president of Birmingham Chamber of Commerce, said yesterday.

Problems might occur, for example, in giving rate-free treatment to a few favoured companies in a small part of a heavily industrialised area.

Speaking at a Birmingham Rotary Club, Mr. Brown welcomed the enterprise zones in principle, particularly that at Bilston, near Wolverhampton. But cities such as Birmingham were "the country's real enterprise zones."

The Bilston scheme would be useful as a seedbed for development of industry, but was

rather small in area. "Not too much" could be expected of it.

Senior industrialists have offered to help West Midlands County Council tackle the problem of rising rates. West Midlands region of the Confederation of British Industry has recruited an advisory committee of financial experts under the chairmanship of Mr. David Richards, finance director of Delta Rod.

Mr. Steve Rankin, CBI regional director, said that he hoped the local authority would agree to a two-way exchange of information. "Recent giant leaps in rates have simply made life even more difficult for already hard-pressed companies, with each other's problems," and it is time we got to grips

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Queen's Speech likely to include ILEA proposal

BY ROBIN PAULEY

THE proposal to break up the London Education Authority is expected to meet such little Cabinet resistance that it is understood to be already on the preliminary agenda for the next Queen's Speech.

The Cabinet will discuss the proposal in the next four weeks. The recommendation to band together the 12 inner London boroughs was made by a committee set up by Mr. Mark Grist, Education Secretary, at the end of last year. Although the quality of the report has been criticised, both Mr. Grist and the Prime Minister have accepted it.

The fact that the destruction of ILEA, the country's largest education authority, is already provisionally listed for legislation in the next session of Parliament underlines Mrs. Thatcher's determination to abolish the authority.

Under the Queen's Speech is not yet finalised and early items can be displaced, although this seems improbable in the case of ILEA. Legislation is likely at the end of November.

The committee set up to inquire into ILEA was chaired by Mr. Kenneth Baker, MP for Westminster St Marylebone. It consisted of three ILEA members including Prof. David Smith, opposition leader on the authority. ILEA's response to the Baker Report says: "It is evident that the pupil numbers on which the future size of the proposed new education authorities are

intended to rest have been totally miscalculated. Unwittingly, therefore, 12 education authorities are proposed, of which half would within six years fewer pupils than any present local education

resources. Rates in all but two London boroughs and the City of London would rise—the largest increase, based on the latest figures available from 1977-78, would be nearly 80 per cent in Wandsworth.

FINANCIAL CONSEQUENCES OF THE TRANSFER OF RESPONSIBILITY FOR EDUCATION FROM ILEA TO THE INNER LONDON BOROUGH

Borough	Rate levied in 1977-78	Reduction (-) or increase (+) in rates if education transferred to inner boroughs
Camden	94.74p	-10.5p
Greenwich	79.00p	+40.5p
Hackney	70.70p	+55.2p
Hammersmith	79.00p	+44.4p
Islington	80.50p	+19.9p
Kensington	80.00p	+2.0p
Lambeth	80.00p	+49.4p
Lewisham	77.86p	+59.7p
Southwark	82.50p	+72.9p
Tower Hamlets	88.00p	+24.4p
Wandsworth	78.50p	+62.5p
Westminster	77.20p	-28.5p
City of London	78.33p	-41.4p

Source: Marshall Inquiry on Greater London.

authority in England, not excluding the Isle of Wight.

But all the criticisms are outweighed in the Prime Minister's view by the lack of democratic accountability of ILEA, lack of financial controls, which mean that the precept for the education charge cannot effectively be challenged, and the cost per head of education which is the highest in Britain.

However, handing over control of education to the boroughs will involve a huge transfer of

Civil engineers want exemption from Finniston authority

BY MAURICE SAMUELSON

THE CIVIL ENGINEERING industry welcomes the Finniston Report's controversial call for a national authority to strengthen the engineering profession—but only if it does not cover civil engineers.

The Federation of Civil Engineering Contractors makes this clear in its reaction to the report, published today.

In its submission to the Environment Department, the federation rejects the Finniston Committee's basic premise that recommendations for an authority must apply to engineering as a whole.

It would "put the clock back" for standards of education and training in civil engineering, it says. However, the federation agrees that an authority is needed to boost engineers' low standing in manufacturing industry.

A more far-reaching rejection of an authority came from the Council of Engineering Institutions last week. The council's future would be in doubt if the authority were established.

Dr. G. Hislop, the council's outgoing chairman, said in a letter to Sir Keith Joseph, Industry Secretary, that the

engineering profession believed it should remain self-regulating, in common with Britain's other major professions.

Instead of the authority, the council proposed raising Engineers Registration Board's status to resemble that of the General Medical Council.

Other reactions to the proposed authority have ranged from wholehearted approval to outright rejection.

The professional bodies representing electrical and chemical engineers have welcomed the plan, as have municipal engineers.

The Committee of Vice-Chancellors and Principals said last week, however, that the authority must be independent of Government and consist mainly of professional engineers. This is similar to the mechanical engineers' view.

The TUC strongly favours an authority. The Confederation of British Industry is expected to take a decision next Wednesday.

The views are part of consultation by the Government before indicating its response to the major Finniston proposals. This is not expected before the summer.

Motorists jostle for £200,000 super-car

By John Griffiths

"PUT IT THIS WAY," said Mr. Ian Curtis, Aston Martin's chairman, "if you want to buy it, get your merchant bankers to talk to ours."

Mr. Curtis was referring to the Aston Martin Bulldog, a gull wing-doored, twin-turbo-charged two-seater announced today as what Aston Martin calls "the ultimate supercar."

Its top speed is about 200 mph, produced by an engine, mounted amidships, which has 60 per cent more power than the unit fitted to the company's 170 mph Vantage model; it has LCD digital instrumentation, five headlights behind a moveable panel; custom-made air conditioning; Connolly hide seating; Wilton carpets and traditional burr walnut panelling.

But it is not planned that the Bulldog will join the production line at Aston's Newport Pagnell plant in Bucks, where 400 employees make about seven cars a week. It is primarily a one-off demonstration of Aston's research and development capabilities, which the company is keen to have used by other manufacturers.

The Bulldog is for sale, however, and rival bids for it are now said to exceed £200,000. The car, designed by William Towns



The Aston Martin Bulldog, the "ultimate" in modern car technology, reveals its gull wing-doored design. Behind it lie advanced instrumentation, luxury fittings and an engine that can produce 200 mph. Even at £200,000 there is no shortage of would-be buyers. It may be the only Bulldog the company will produce.

—the Lagonda's creator—and built during the past 12 months in small, sealed-off premises at the back of the factory, is said to have cost £130,000. It is possible, but unlikely, that more will be built if would-be buyers are insistent enough.

The idea for it arose from informal talks two years ago between Mr. Curtis, Sir Michael Edwards and BL's managing director, Mr. Ray Horrocks, on possible co-operation to produce an Aston-Jaguar sports car replacement for the Jaguar E-type. That did not materialise, and with Aston Martin itself then going through a lean time with its existing models, not

until 12 months later did Aston decide to develop the Bulldog on its own. With the recent agreement in principle for Aston Martin to take over MG production and development from BL, Aston's aspirations to be the catalyst for a major revival of British sports car sales internationally—viewed sceptically at BL—are far from dead.

Mr. Curtis said he would like to see "total co-operation" between Aston Martin, MG, Jaguar and Triumph: "It is my belief that Aston Martin could and should be used to lead a campaign to sell British sports cars throughout the world."

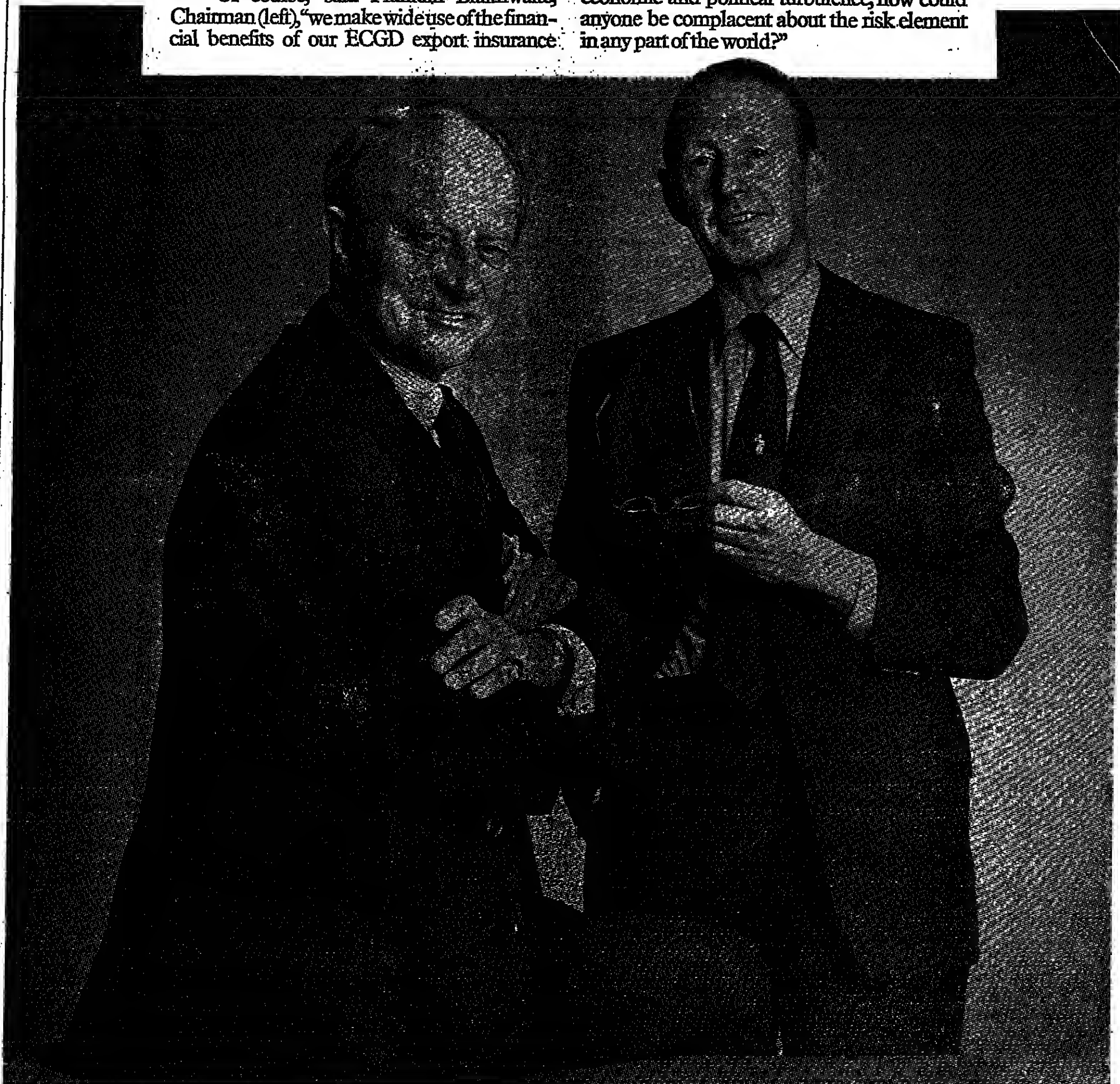
"£600,000 SAYS WE WERE RIGHT TO HAVE ECGD COVER"

As you would expect of a company which has won two Queen's Awards for Export, the Baker Perkins Group (headquarters Peterborough) is not only successful but highly professional in its approach to the exporting of plant and machinery for the food, chemical, printing and foundry industries.

"Of course," said Franklin Braithwaite, Chairman (left), "we make wide use of the financial benefits of our ECGD export insurance

policies—especially extended credit terms. But apart from that, with export sales of over £35 million last year in 100 countries, I don't think I could sleep at nights without export insurance protection which is good value for the premiums we pay."

"During the 1970s" added Managing Director John Peake, "ECGD paid us promptly claims of over £600,000 in markets where we thought we were safe. But with the current economic and political turbulence, how could anyone be complacent about the risk element in any part of the world?"

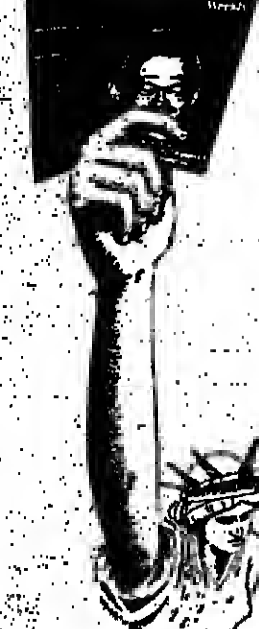


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UK NEWS - LABOUR

Threat to 30,000 more Welsh steel jobs

By Robin Reeves, Welsh Correspondent

THE British Steel Corporation wants agreement with trade unions on 30,000 further redundancies in the Welsh steel industry by the end of June, Mr. Peter Allen, managing director of the Welsh Division, said in Cardiff yesterday.

The majority of the job losses would take effect in September and the programme would be largely completed by the end of the year. Combined with the 6,400 jobs which have already gone at the Shotton steel works in North Wales, the cuts would reduce the Welsh Division labour force from 47,000 last January to about 27,000 in a year's time.

The bulk of the redundancies are planned at the corporation's works at Port Talbot (8,900) and Llanwern (4,400), where throughput is to be halved to 2.75m tonnes as part of the general retrenchment programme. But a further 700 jobs are to go at the three Welsh tinplate plants, another 900 in Shotton's steel coatings complex, and 600 in smaller Welsh plants which come under the Associated Products Group.

Details of the redundancy proposals, handed to trade union representatives last Friday, include the possibility of severance payments of 20 weeks wages, on top of the corporation's normal redundancy terms for those leaving the industry.

This is less than the payments made to workers at Shotton and other closed works in the recent past. But the Corporation argues that those closures were brought forward from agreed dates, whereas the latest redundancies are at plants which will continue in production, albeit with drastically reduced manning.

Mr. Allen warned that the number of job losses could be even higher if steel sales turned out to have suffered more than expected from the national steel strike, increased imports, and the economic recession.

Stay home call

THE Transport and General Workers Union expects all construction workers to stay away from work on May 14, the TUC's day of action in protest against the Government's policies, the union announced yesterday.

Post Office engineers receive 5¼%

BY PHILIP BASSETT, LABOUR STAFF

POST OFFICE engineers were yesterday awarded pay increases averaging 5¼ per cent by an arbitration tribunal. The award is likely to compound the Post Office's difficulties over telecommunications pay.

The increase will make settlement harder to attain in the dispute between the Post Office and the Society of Civil and Public Servants, which has authorised what could be a repeat of last year's financially damaging action by computer staff if the Post Office fails to meet its claim over differentials.

The engineers' award, details of which were given to both sides yesterday, forms the second stage of the 1979 pay settlement for the 120,000 members of the Post Office Engineering Union. The increase, which will be backdated to March 1, is in reply to a 10 per cent

claim. It will be paid on top of the first stage increases last year, which gave an average rise of 18 per cent, a 2 per cent productivity payment and other improvements in reply to a 15 per cent claim.

The award will increase the rate for the technical officer grade to £6,338 from £6,019, the level fixed by the first stage of last year's settlement. In addition London staff receive a 5887 weighting allowance.

The POEU argued before the tribunal, which was held under the auspices of the Advisory, Conciliation and Arbitration Service, that the second stage increases should not be part of the Post Office's attempt to make major changes in the structure of grades in the telecommunications business.

The Post Office was unwilling to make a second-stage offer without a commitment from the POEU on restructuring.

The Post Office has been trying since last year to bring all its telecommunications unions into a common pay structure through roughly similar pay increases.

Sir William Barlow, Post Office chairman, recently met leaders of all the unions involved in telecommunications which are drawing up their pay claims for this year's settlement, and asked them to formulate a joint claim. Most union officials seem to think it unlikely, though, that enough agreement can be found between them to comply.

Some union officials were warning yesterday that the POEU award would raise the

going rate of claims for this year's deal.

The award goes some way to undercut another recent tribunal decision, which gave increases of 21.26 per cent to members of the Society of Post Office Executives.

The Society of Civil and Public Servants, which is threatening action involving its computer staff, claims that this award distorted a 5¼ per cent payment promised to its members from April 1 in return for some grade restructuring. The future complication of the POEU award is likely to be discussed at a meeting between Post Office management and the SCS today.

The OEU award is also likely to distort relationships with clerical staff in the Civil and Public Services Association, which was involved in last year's telephone bills dispute.

Isle of Grain redundancies start

THE FIRST large batch of redundancies at the Isle of Grain power station will take place at the end of next week, a result of the long-standing dispute over ladders' bonuses.

The Central Electricity Generating Board said yesterday some 600 workers would lose their jobs. It indicated more could follow if a solution to the dispute is not found during the summer.

The General and Municipal Workers' Union said the redundancies marked "the beginning of the end" of the £560m Kent project—the largest oil-powered station in Europe.

Mr. Frank Earl, national officer, said the union would step up its campaign for a public inquiry into the station's

problems. There was a "deliberate" policy to pin the blame on the ladders' dispute.

The 27 ladders took other jobs last month. Since then the dispute has taken on a strange aspect. It remains in need of resolution, but there are effectively no longer any workers, union or direct employers involved in it.

The GMWU declared its withdrawal at the end of February. The contractors employing the ladders left the project before the end of the year.

The generating board has consistently tried to stay in the background, saying it was not a direct employer of the ladders and, therefore, not a party to the dispute.

The last attempt at resolution

aborted at the beginning of this month. The GMWU and the board failed to agree terms of reference for a meeting with insulation employer representatives to discuss a compromise put forward by the TUC.

This board backed by the electricians' union and the engineers' unions' construction section, wants a ceiling imposed on ladders' bonuses to prevent leapfrog claims from 1,600 other site workers. The GMWU has insisted the bonuses are open-ended.

Mr. Len Murray, TUC general secretary, became involved with a compromise suggestion that, while a strict ceiling should not exist, there should be agreement to make sure bonuses were not unreasonably out of line

Bank union chiefs face censure bid

By John Lloyd

MOTIONS to tighten union policy on banks' opening hours, and to exercise more control over the introduction of new technology in the financial sector, will be debated by the Banking, Insurance and Finance Union at its annual conference at the end of this month.

The composite motion on opening hours censures the union's executive committee for its "complete disregard" of policy, and instructs it to begin negotiations to "reduce the number of banks operating late night opening with a view to eliminating this practice entirely."

The motion would allow certain exceptions to continue, including late opening at bank branches at international transport terminals.

On new technology, motions endorse a report by the union's microelectronics committee. The report says there has been a "quiet revolution" in technology in the financial sector, and advocates greater union control over its introduction.

The report recommends that the union should not co-operate with any employer which refuses negotiations on the introduction of new technology. It also seeks improvements in job security, pensions and living standards.

CLEGG PAY COMMISSION FINDINGS

Rise of 18.2% proposed for 600,000 teachers

BY MICHAEL DIXON, EDUCATION CORRESPONDENT

THE RISE averaging 18.2 per cent recommended by the Clegg Commission yesterday for about 600,000 teachers in schools, colleges and polytechnics is on top of the 9.5 per cent increase they received in April 1979.

The commission's proposals, which are not binding, but for negotiation between education authority employers and the various organisations of teachers, would add about £640m to an annual pay bill of about £3.5bn.

A further £115m would be added to the cost by consequent increases in employers' pensions liability and in National Insurance contributions.

Of the recommended 18.2 per cent, teachers have already been receiving 7.5 per cent from January 1 as an interim award.

In terms of "new money," therefore, the Clegg proposals represent an average rise of 10.7 per cent, or a total of about £580m in extra salaries.

Of this, 2.2 percentage points will be backdated to January 1, with the remaining 8.5 becoming payable from September 1.

Anomalous

The commission produced its report on teachers' pay after a nine-month study. Much of the time was occupied by trying to determine comparisons between teaching and other work in a job-evaluation exercise by Inbucan management consultancy.

But the exercise, which cost £30,000, produced results so anomalous, suggesting large salary rises for schoolteachers but substantial cuts for their counterparts in colleges, that the commission discarded its findings.

The recommendations were finally determined by comparing starting salaries for graduate recruits in teaching with those of graduates entering other jobs, and applying that comparison to the salaries of senior teachers and heads and deputy heads of schools and colleges. The resulting proposal is that the 18.2 per cent average rise be distributed so as to in-

crease differentials of senior staff.

At the bottom of pay scales in both school and colleges the rise would be 17 per cent, increasing minimum salary in school-teaching to £3,780, and in college lecturing to £4,071.

The most senior classroom teachers, in schools, and principal lecturers in colleges, would receive 20 per cent, raising their respective maximum salaries to £9,267 and £11,568.

Rises of 25 per cent would go to the heads of the biggest establishments, producing a maximum of £15,732 in schools and £21,243 in further educational institutions.

Although the Clegg Report finds that there are grave shortages in schools and colleges of staff qualified to teach mathematics, physics and other subjects related to work in the economy, it makes no recommendation for extra pay for teachers with such qualifications.

Instead, it proposes greater flexibility in use of existing pay scales to provide incentives for the much-needed staff, and a small increase in the number of higher-paid posts available for them.

To what extent the recommended distribution will be followed in practice will depend on negotiations between education authorities and teachers' unions, due to be resumed this week.

Complicated

The negotiations, conducted separately for England and Wales and for Scotland, and separately for schoolteachers and for college staff in each, will take into account not only the Clegg proposals, which relate to the 1979 pay award,

but also the further rise due from April 1 this year.

The settlement for about 470,000 schoolteachers in England and Wales will be further complicated by the Clegg Commission's statement that in recommending the higher salaries, it has "taken into account the wide range of extra-curricular activities which are part of the professional obligation of teachers to pupils, parents and schools."

Such extra-curricular activities are at present regarded as voluntary, and any attempt to include them as paid work in schoolteachers' contracts has been ruled out in advance by the two biggest teachers' unions, together representing about 80 per cent of school staff south of the Border.

Prof. Hugh Clegg, chairman of the commission, said in London yesterday that he had no right to say whether there should be a contractual obligation on teachers to carry out the extra work. But he regarded it as a moral obligation which most school staff discharged.

If this were not the case, he added, the proposed salary increases "would not have been the same as they are in the report."

In Scotland, the negotiations resulting from the commission's proposals will be even more contentious than their counterparts in England and Wales.

Although salary scales for teaching north of the Border are different from those prevailing elsewhere, the Clegg Report has not furnished details of the proposed scales for Scotland.

If unions and education authorities there wish for a quick settlement in the light of the recommendations, the report says, they can simply adopt the scales proposed for England and Wales.

Otherwise they can work out their own, different distribution within the total amount of the 18.2 per cent average increase. Teachers' Report No. 7 by the Standing Commission on Pay Comparability, Cmnd 7380, HMSO, £2.75.

Lucas calls talks on strike

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

LUCAS ELECTRICAL has called in fulltime union officials for talks today to try to end a dispute which could leave thousands of workers idle.

The 48 quality inspectors who check components used for production by Lucas walked out nearly two weeks ago.

They are demanding upgrading from the semi-skilled category. Lucas clearly fears any concession could trigger demands from other groups of workers in the company.

Lucas has already laid off 700 workers at the Cannock factory, which makes headlamps. The company has warned that, unless the strike ends quickly, other employees at its eight Birmingham factories could be made idle.

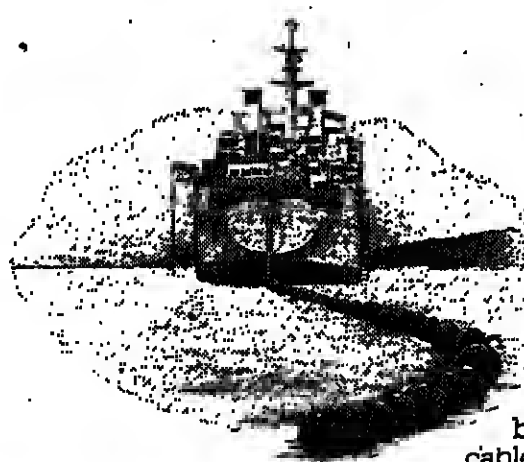
Lucas Electrical, with 16,000 workers in the Birmingham area, is still evaluating the size of any cut in the labour force which reduced demand from the motor sector may cause. Union officials fear 2,000 redundancies could be announced.

Hospital scuffle

PICKETS clashed with delivery drivers trying to take supplies to Belfast's Royal Victoria Hospital complex yesterday.

Scuffles broke out as vans with food and medical supplies tried to get past the hospital gates, on the fourth day of the strike by more than 1,200 National Union of Public Employees members against soldiers stationed there to guard against terrorist attacks.

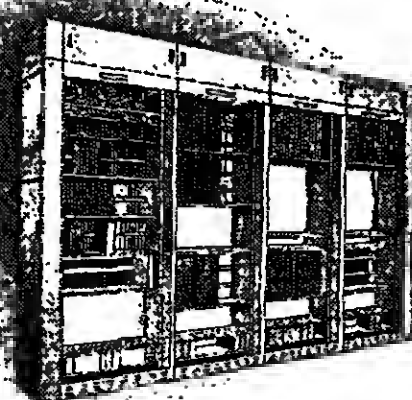
The hospital said a van with food and pharmaceuticals for delivery to another affected hospital was forced to leave without them.



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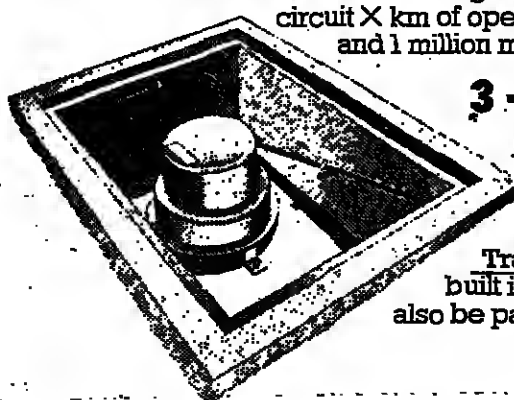
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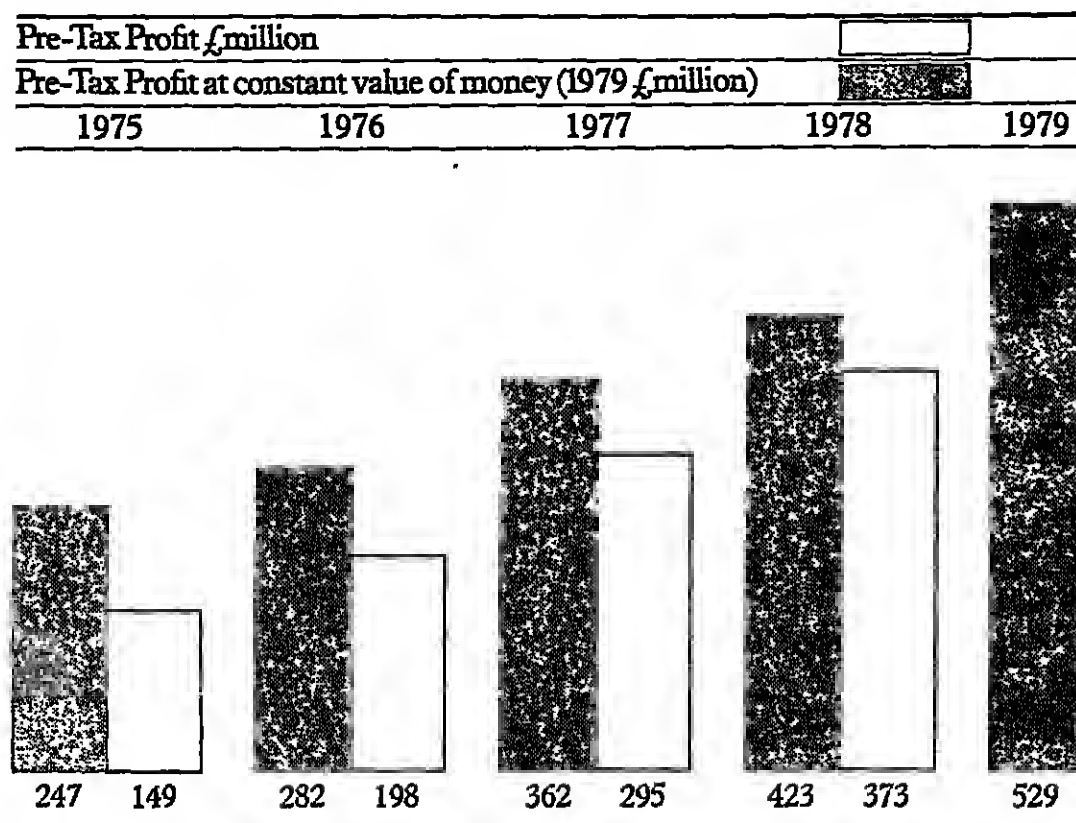
مكتبة النهر

Barclays 1979

The impact of inflation on a business dealing only in money.

The Annual General Meeting of Barclays Bank Limited will be held in London on May 8th, 1980. The following are extracts from the address to the Stockholders by the Chairman, Sir Anthony Tuke, for the year 1979.

Our profits of £529.4 million show an increase of 42% over last year's figures, but one must set against this increase the impact of inflation on a business dealing entirely in money. In order to stand still, we have to match the year on year rate of inflation and, if we were to add 18% to last year's profit, we would come to a figure of about £440 million. In fact we have done rather better than that, but we have been operating for most of the year against a background of very high interest rates and this has been of considerable benefit to the Clearing Bank which has provided by far the largest part of the increase in our profits. When rates come down, as they surely will, the branch banking system will inevitably face a challenge to control its costs if it is to continue to produce a major contribution to the profits of the Group. On the international side, a strong pound and the narrow spreads in the Eurodollar market have made profits harder to earn. Nevertheless, Barclays Bank International has shown a satisfactory increase mainly due to a general growth of business throughout the world. The table below puts the Group's profits since 1975 in true perspective, and one can see the effect of the falling value of the pound on our figures.



For the first time this year we are setting out our general and specific provisions for bad and doubtful debts separately. Provisions are not an exact science as they depend on individual judgement, but there is a case for providing Stockholders with more information. The specific provision, as its name implies, is attached to a particular debt and each of our Managers throughout the world has the responsibility of relegating all or part of a debt to the doubtful category as soon as he has reason to believe this debt will not be repaid in full. Exactly how much of a debt is relegated in this way must be a matter of judgement and it is sometimes said that human nature encourages a conservative attitude. We are, however, most careful to see to it that over-provision is not taking place and our specific provisions are calculated on a basis of likely loss.

General provisions are in a different field. We know from experience that a bank or, in our case a Group of banks, has within its portfolio debts which though not identified as such may well turn out to be bad. Political risks are an obvious example of this and one can think of others; for instance, the strike in the steel industry will almost certainly bring with it problems amongst borrowings already in our books. It is right therefore that Stockholders, who after all own the business, should be advised that in the opinion of the Directors there is a clear line to be drawn between the reserves of the Bank, which are part of their equity, and a prudent sum to be set aside for problems unidentified as yet. Under the convention known as the Leach/Lawson Rules, formulated in 1969 for the Clearing Banks before they became fully international, we have maintained our general provisions within a band of 1% to 1½% of advances and, in recent years, these have been defined by the authorities as excluding advances regarded as risk-free. We continue to follow this convention in this year's Accounts, but the time has surely come to look into the arbitrary distinction between advances at risk and those considered to be risk-free, particularly as the latter category includes advances and deposits placed with banks outside this country and clearly some of these funds are not free from risk. The present position in Iran and the understandable American reaction in freezing deposits are examples of a situation that makes this classification less and less realistic. It is the duty of the Directors to make a judgement on the correct general provision on a world-wide basis as we have great responsibilities outside this country. The existing formula will, I believe, need to be reconsidered but, in the meantime, Stockholders can feel reasonably satisfied that we have about £145 million set aside for these contingencies.

Our long-term Stockholders naturally pay more attention to the dividend they receive than to the market price of the stock on any particular day as this is affected by all sorts of matters outside our control. The amount of the dividend, however, is now within our control and any holder of a Bank share will no doubt hope that his dividend will at least keep up with inflation. If we go back to 1961, the date of our last Rights Issue, this hope has been fulfilled but, if we start in 1973, we have fallen slightly behind. This year, we believe our Stockholders should get a little bit ahead of the current inflation rate and the Board therefore recommends a dividend of 10.25p per £1 Ordinary stock. We also propose later in the year to make a one-for-five Scrip Issue and, subject to any unforeseen circumstances, we hope to pay the same rate of dividend for the year 1980 on the increased capital; although a Scrip Issue does no more than divide the cake into more slices, a number of our Stockholders have told us this would be welcome to them.

Banking trends

The 1970's opened with high hopes for domestic banking, partly as a result of the abolition of lending ceilings. In money terms, the banks appear to have done well; sterling deposits have just about trebled though the rate of growth has slowed since 1974. The endowment element in high interest rates has offset the unrecovered cost of our money transmission services and has taken some of the sting out of the fact that the foreign banks have acquired a larger share of domestic lending and, in addition, margins have narrowed. The period has also been associated with a remarkable growth in wholesale lending markets.

Unfortunately this decade is opening with a recession and prospects for economic growth cannot brighten until three main features of our life change. First, we must raise our comparatively low productivity; second, we must shift our industrial base from old declining industries to those of new technology; and, third, we must improve our industrial relations which have suffered so much from the strains of inflation.

The incipient recession and the likely change of balance from older manufacturing industry to new activities, including services, may restrain the rate of growth of corporate lending for some years. Nevertheless, corporate profits in real terms are at present very low and this must strain liquidity and force companies to maintain their bank borrowing, however involuntarily. But, if Britain can obtain a much needed improvement in industrial profitability, a larger share of industry's financial needs may be met from retentions and a more active new issue market. Until this happens the burden will remain with the banks who must become still more responsive to the needs of their corporate customers for skilled services.

Over the next ten years, the banks should be able to expand their personal sector business both in money transmission and credit, but competition will be sharp from the public institutions and the building societies. The single most important question for the Clearers in the personal sector is whether they will be able to attract on a profitable basis that part of the population which does not at present have a bank account. Our success will depend upon our ability to persuade Government, the Unions and employees to move away from cash wages and this depends to a great extent upon whether we can provide members of the public with cash where they want it, at all hours of the day, seven days a week, and also upon the development of electronic funds transfer and plastic card technology. Changes in our banking systems that will allow all our customers to meet more of their needs away from the bank counter seem an essential prerequisite for a breakthrough in the personal field.

At the same time, we will have to take greater advantage of our existing resources including our branch network. We need to strengthen our share of the market in personal lending and as collectors of savings, where we have lost ground to the building societies in particular.

International

Turning to the international banking field, the predominant feature of the 1970's has been the expansion of the Eurocurrency deposit market, which grew tenfold in money terms far outstripping the growth of deposits raised locally in individual countries. The supply of OPEC deposits and the liquidity they have given the international banking system have reduced margins even in lendings to high risk developing countries, which have become the major borrowers. This could well continue into the 1980's even though the international political scene is much less stable than it has been for some years. Part at least of the world's economic problems has arisen from the roughly twentyfold increase during ten years in the dollar price of oil and one effect has been a similar increase in the price of gold. Unless the dollar strengthens its appeal as a reserve currency, it may be that the movement to non-dollar currencies will continue and this, coupled with the recent abolition of exchange control, should give British banks a chance to expand their share of the international market, particularly as their exposures to risky areas are probably less than many of their international competitors. However, all banks will look to wider margins if only because of the need to maintain capital ratios in an era of continued inflation and uncertainty.

The international side of the Group's business has been transformed from overseas banking in former colonial territories into that of a fully international bank. In 1971, we acquired the minority interest in Barclays Bank DCO. Since then, we have developed our business rapidly in a number of financial centres - Europe, Australia, the Far East, South America and, most of all, the United States where we now have 464 branches and where our purchase of Barclays American Corporation was the largest foreign acquisition we have ever made. We have also built up a strong position in the wholesale sterling and Eurocurrency markets in London itself.

Other developments

At home, we have developed a number of our services to the corporate market including those of our Merchant Bank, the introduction of our Business Advisory Service to help small and medium size companies in their financial management problems and the substantial growth of medium term lending. We have also increased considerably our wholesale deposit base from negligible figures to more than a quarter of our deposits, the majority of which come from our own customers.

Important in the personal field was the acquisition of Mercantile Credit Company which, in addition to expanding its share of the market in consumer credit, has become our leasing arm and is now amongst the largest leasing companies in this country. Its business in this field continues to provide growing support for industrial investment.

The development of consumer credit in branches and through Barclaycard has been a significant feature which we expect to continue, including perhaps a modest entry into the home loan market as soon as conditions permit.

If I were to prophesy the main areas of growth for us in the next ten years, I would say that in our corporate business the need for the development and finance of world resources will provide further scope for the services of multi-currency medium term lending, foreign exchange, energy and project finance and export credits. In the domestic field, further expansion of a wide range of consumer credit will continue to be a buoyant area on which the future prosperity of our operations will depend. The real challenge to us over the next few years will be our ability to create the necessary modern banking systems and facilities to attract profitably the 11 million wage and salary earners who today have no active clearing bank account.

Staff

In 1970, we employed 75,000 men and women in 42 countries; today, we employ over 110,000 and we now cover 75 countries. These figures illustrate the expansion of the Group over the last decade, progress which would not have been achieved without the whole-hearted support of our staff; this has made it possible for us to grow and yet maintain the high standard of service we offer to customers.

In the past year, their work has not always been easy - for example, during the fighting in Uganda there was only one day when we were not able to offer some sort of service to our customers; in Dominica and St. Vincent, natural disasters caused havoc. At home, the threat of violent robbery, once almost unknown, is ever present.

Unless our customers are provided with a high standard of service, we shall fall behind our competitors. There is no danger of that while we have such a keen, loyal and efficient staff and I know that Stockholders will wish to give them the thanks they so fully deserve.

Anthony Tuke

Sir Anthony Tuke, Chairman of Barclays Bank Limited.

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In view of the possible adjustments which may be made at a later date, details of the interest of all Bonds and Coupons should be retained by the bondholders. The question of whether the Bonds and Coupons maturing on or after 1st June 1980 are presented for payment or not, is a matter for the bondholders to decide.

Bonds and Coupons due 1st June 1980 may be presented for payment on and after 1st May 1980 at the Chief Registrar's Office (Bank Buildings, Bank of England, Bank Buildings, Princes Street, London, EC2R 9EL, or at any branch of the Bank of England, accompanied by appropriate forms obtainable from the Bank of England. Bonds and Coupons should not be lodged through the post.

Payment for such Bonds and Coupons will be made as follows:

- (a) On 2nd June 1980 for payments made on or before 27th May 1980 and on 22nd May 1980 for payments made on or after 28th May 1980.
- (b) On the fourth working day (which working day is a branch after judgment for the purposes of the Act) subsequent to 27th May 1980 and on 22nd May 1980 for payments made on or after 28th May 1980.

The Coupons due 1st June 1980 and also any Coupons previously due which have not been paid, must be presented to the Bank of England for payment and collected in accordance with the terms thereof.

April 1980. BANK OF ENGLAND.

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1. To consider and approve an amendment to article 22 of the articles of association of the company, so that the company may be authorised to issue shares of a nominal value of £1.25 each.
2. Any other business.

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A FINANCIAL TIMES SURVEY
ACCOUNTANCY

MAY 13 1980

The Financial Times is planning to publish a Survey on Accountancy. The provisional editorial synopsis and date are set out below.

The Survey is scheduled to coincide with the centenary celebrations of the Institute of Chartered Accountants in England and Wales. It will have the theme: achievements, failures and future problems, and will examine UK accountancy from the points of view of chartered accountants themselves and the consumers of accountancy services. Individual articles are planned as follows:

Introduction: A leading profession after 100 years, which now attracts the cream of the top universities. Its achievements, failures and continuing problems.

Chartered Accountants in Business Leadership: Chartered accountants have come to dominate the finance director function in British industry—with certain notable exceptions such as the clearing banks and insurance companies. Is the CA the ideal business leader?

The Rewards of Being a CA: Whether in public practice, industry or elsewhere, chartered accountants are among the best paid people in British society. A review of rewards in employment and partnership.

Give the client what he wants: Whatever the size of the partnership, accounting firms pride themselves on client service. What are the services available, and how are firms adapting to clients' changing needs. From multinationals, High Street shops to individuals with tax problems.

Accounting Standards: Will enforcement of standards ever come? Talks have been going on with the Stock Exchange and the Council for the Securities Industry, but how much can be expected from self-regulation—even if it gets off the ground?

Auditing Standards: The rules the profession has not needed for 100 years are slowly emerging. Why are they so sensitive? Meanwhile some of the UK's largest accounting firms are reporting on accounts in Europe with the assurance: "Our work has been carried out in accordance with generally accepted auditing standards." Whose standards?

Self-Regulation under Greville: The profession has accepted the Greville report on how examples of bad workmanship should be handled. The scheme is now in a state of operational alert. It needs some tough cases to establish credibility.

Integration: An issue from the past which refuses to go away. Yet the chances of another grand scheme getting off the ground seem slim. How is the UK profession shaping up for the next 100 years?

Inflation Accounting: The UK has finally got its first inflation accounting standard, a few years later than the Government planned. A review of the scheme.

Penetration in Government: Despite the UK accountancy profession's status in business and society at large, it has made little headway in Government. There are moves to correct this, but...

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PM pledges support for U.S. on Iran Approval of AGR reactors 'will not affect cash limits'

BY PHILIP RAWSTORNE

EEC Foreign Ministers are expected to decide on Monday on a concerted response to President Carter's appeal for support in obtaining the release of the U.S. hostages in Iran.

Mrs. Margaret Thatcher told the Commons yesterday that the Government was holding urgent consultations with its EEC partners and other friendly countries on possible political and economic sanctions.

But she warned: "It is important that whatever we do should be effective and should be capable of commanding a broad measure of international support."

The Prime Minister was given united Commons backing for her pledge of solidarity with the U.S.

Mr. James Callaghan underlined the importance of her bid to obtain maximum international agreement on the tactics to be employed.

He stressed: "Military action would be no solution." If a drift into war was to be avoided, the greatest possible consultation and co-ordination was necessary, he said.

Mrs. Thatcher agreed that military action would be an "extremely serious" step.

The U.S. did not contemplate the use of force now and intensified diplomatic and economic measures against Iran were designed to avoid it, she said.

The Prime Minister said that the U.S. had exercised "remarkable patience and restraint in the face of the



Thatcher: united backing; Callaghan: stressed tactics

greatest provocation. "Time and again their reasonable hopes of progress have been dashed," she declared.

It was clear that the prospects of securing the early release of the hostages by diplomatic action had markedly diminished.

"The U.S. administration have put up with the flouting of international law and established diplomatic practice by Iran for several months."

naturally they now feel obliged to demonstrate that the continued detention of their people will carry increasing penalties,"

Mrs. Thatcher told MPs. "They understandably expect solidarity from their allies and we, for our part, have been giving and will continue to give them our utmost support."

Mrs. Thatcher said that the U.S. had asked Britain to consider a wide range of measures including the economic sanctions vetoed at the United Nations by Russia and an eventual break in relations with Iran if there were no progress.

The Prime Minister said that President Carter had set no deadline for a response from Britain and other EEC states.

And replying to Mr. Callaghan, she agreed that the issue could be considered at the EEC summit in Luxembourg at the end of the month and, if necessary, at a special summit meeting with President Carter.

"Our objective is to show our support for the American people and President Carter and to do everything possible to secure the release of the hostages."

Mr. David Steel, Liberal leader, suggested that it was "unfortunate" that the U.S. had to ask its allies to intensify their efforts over Iran.

If the principle of diplomatic immunity was broken, it would be an open invitation to any dictatorship to use diplomats as hostages, he said.

Mrs. Thatcher denied that EEC countries had been slow to react to the situation in Iran. The U.S. had been pursuing other diplomatic moves and it was only when those failed that an appeal had been made to consider further action, she said.

Mr. Geoffrey Rippon, former Tory Cabinet Minister, welcomed the "firm and positive note" of the Prime Minister's statement.

Western Europe had long sheltered under the umbrella of U.S. strength and should now be prepared to share the burdens as well as the benefits of the alliance, he declared amid cheers.

Mr. Ray Whitney (C. Wycombe) urged Mrs. Thatcher to consider an urgent summit meeting of four or five Western

leaders with President Carter. The Prime Minister pointed out that there would be a summit meeting in June. "But if that is not soon enough then I am sure none of us would rule out an earlier meeting," she replied.

Mrs. Thatcher agreed with Mr. Tom Dwyer (Lab., W. Lothian) that any economic blockade of Iran could force the country into dependence on Russia.

"That is a factor to be considered," she said. "But the patience of the U.S. is not inexhaustible. Diplomatic action has not so far succeeded... in that situation we have to consider what next to do."

Some members of the Iranian Government had been anxious to help but their hands had not been entirely free, Mrs. Thatcher said. Other Islamic countries had also tried to help — "the fact is that so far all other methods have failed."

Mr. Bob Cryer (Lab., Keighley), suggesting that Britain might be "pre-empted" into taking action which could later prove untenable, called for an assurance that no further Government action would be taken without Commons approval.

Mrs. Thatcher replied: "Before any further action or economic sanction could be effective, we would have to come back to this House."

She re-emphasised: "We do want wide international support for any measures. They cannot be effective without it."

BY IVOR OWEN

CONFIRMATION OF the decision to build two advanced gas-cooled reactor nuclear power stations will not lead to any relaxation of the existing cash limits set for the Electricity Generating Board, Mr. David Howell, the Energy Secretary, assured the Commons yesterday.

He denied a suggestion by Mr. Arthur Palmer (Lab., Bristol NE) that the Cabinet's belated endorsement of the earlier go-ahead for the two stations—one is to be built at Heysham in Lancashire and the other at Torness in Scotland—involved a clash with a cash limit.

Mr. Palmer claimed that the Cabinet had hoped to resolve the dilemma by obtaining a report from the Downing Street "think tank" advocating postponement of the AGR stations until a pressurised water reactor, based on an American design, was ready.

Mr. Howell replied that Mr. Palmer was referring to rumours. There was no conflict between the cash limit at present placed upon the industry and the decision to go ahead with the two stations.

As had already been made clear, it was the Government's objective to have a PWR reactor "in due course" but in the meantime it made sense to go ahead with the available nuclear technology—the AGR.

The Central Electricity Generating Board would be responsible for the building of the two stations and they would keep within their cash limits in doing so.

Welcoming the confirmation of the go-ahead for the two stations, Dr. David Owen, Labour's Shadow Energy Minister, said they would provide the steady ordering programme which was absolutely vital if the nuclear power industry was to remain viable throughout the next decade and beyond.

Mr. Howell stressed: "We now have a basis for a steady ordering programme and the revival of the British nuclear industry. He told Mr. Owen that a statement would be made "very shortly" about the new chairman of the National Nuclear Corporation.

Mr. Howell had to deal with



HOWELL: "No conflict"

a number of critical questions from the Government benches, including one from Mr. Trevor Street (C. Bedford) who complained that the existing AGR stations were very hard to replace and extremely expensive.

He argued that it would be wise to run "the Gordon Knot" and go straight for the PWR.

Mr. Howell pointed out that the Hinkley B AGR, taking all things into account, compared very favourably with fossil fuel stations.

Safety

As for the "Gordon Knot" the fact was that Britain had the capacity, technology, and opportunity to build AGR stations.

Before a PWR station could be processed with full consideration would have to be given to safety which must be paramount, and there would have to be a full public inquiry.

In the meantime, the building of the AGR stations would mean that Britain was a little less behind some of her competitors in the generation of electricity by nuclear power.

Mr. Howell emphasised that all the evidence indicated that electricity generated from nuclear stations was cheaper than that from other types of power stations.

He contended that, with the threat to oil supplies, this price could well become even more pronounced in the future and it was therefore urgent for Britain to diversify her sources of energy.

Gibraltar/Spain frontier to re-open Criticism on duplication of housing accounts

THE FRONTIER between Gibraltar and Spain will be re-opened as soon as possible after June 1, Lord Carrington, Foreign Secretary, told peers yesterday.

In a statement he said the "very important" agreement had been reached in Lisbon last week at his meetings with Sr. Oreja, Spanish Foreign Minister.

Lord Carrington stressed that the Government remained committed never to allow the people of Gibraltar to pass into the sovereignty of another state against their wishes.

Referring to the agreement reached on April 10, Lord Carrington said: "It is envisaged that the practical preparations will be completed not later than June 1 which will then allow the agreement to be speedily implemented."

He added: "This is a very important step, though I should emphasise that this is only the beginning of what is likely to be a very long process."

The decision was another milestone for democratic Spain said Lord Carrington, who paid mans to Sr. Oreja's stateship-tribute to Sr. Oreja's statesmanship and goodwill.

It was a significant contribution to the relationships between the two countries and for the people of Gibraltar who had been cut off from Spain for 11 years.

Lord Carrington said he had discussed the move with the colony's Chief Minister Sir Joshua Hassan, and the Leader of the Gibraltar opposition in London earlier yesterday.

He stressed: "The Anglo-Spanish statement re-affirms the Government's commitment never to enter into arrange-

ments under which the people of Gibraltar would pass under the sovereignty of another state against their freely and democratically expressed wishes."

In the Commons, Mr. Peter Shore, shadow Foreign Secretary, welcomed the agreement. The "siege" of Gibraltar had been "wholly unjustified from beginning to end," he said.

He supported the Government's commitment not to enter into arrangements for the transfer of Gibraltar to another State against the wishes of its population and asked whether talks with Spain would include the question of sovereignty.

Sir Ian Gilmour, Deputy Foreign Secretary, said it had been agreed that nothing would be hurried.

Sir Ian, replying to Mr. Stephen Ross (Lib., Isle of Wight), said the Spanish restrictions on flight paths was one of those which should come to an end.

Replying to hecklers, Sir Ian ruled out any possibility of a referendum of Gibraltarians over the question of sovereignty.

"There was a referendum some time ago and I think to have another one now would be rushing things very much indeed," he said.

The question of to whom Gibraltar would pass to if Britain pulled out did not arise. "We have no intention of withdrawing," he insisted.

Criticism on duplication of housing accounts

By Andrew Taylor

NEW LEGISLATION is required if wasteful double-checking of Housing Corporation accounts by both Corporation and Environment Department officials is to be ended, Sir Geoffrey Wardle, Permanent Secretary to the DOE, said yesterday.

Sir Geoffrey was giving evidence before the select committee on public accounts. He faced strong criticism from MPs from both major parties over delays in resolving the problems of duplication.

Mr. Joel Barnett (Lab., Heywood and Royton), said it was surprising that Sir Geoffrey could give no indication as to whether changes in legislation would be included in any of the Bills presently before Parliament.

Sir Geoffrey said that he could not inform the committee of plans for new legislation because "I cannot tell you what Ministers might decide."

Atkins meets Irish Ministers

BY OUR DUBLIN CORRESPONDENT

MR. HUMPHREY ATKINS, the Northern Ireland Secretary, began two days of talks with Irish Government Ministers in Dublin yesterday.

He will have talks with Mr. Haughey, the Prime Minister, as well as Mr. Lenihan and Mr. Collins, the Foreign and Justice Ministers.

It is unusual for an Ulster Secretary to spend more than one day at these meetings and this has led to speculation that he might be telling the Irish what plans the British Govern-

ment has for a new political initiative in Northern Ireland.

Dublin sources say security does not appear to be high on the British agenda this time and so the bulk of the discussions may be political.

For his part, Mr. Haughey seems certain to repeat his proposal that the problem be viewed in an all-Ireland context and that, as a first step, it should be made clear that the guarantee of UK membership to Northern Unionists is not unconditional.

There seems little likelihood that Mr. Atkins will accept such a proposition but it is much less clear what the British Government does intend in the light of the failure of the recent constitutional conference.

Some kind of attempt to impose a system of devolved government cannot be ruled out but the main difference between the two Governments is likely to be the role of all-Ireland institutions in a devolved system.

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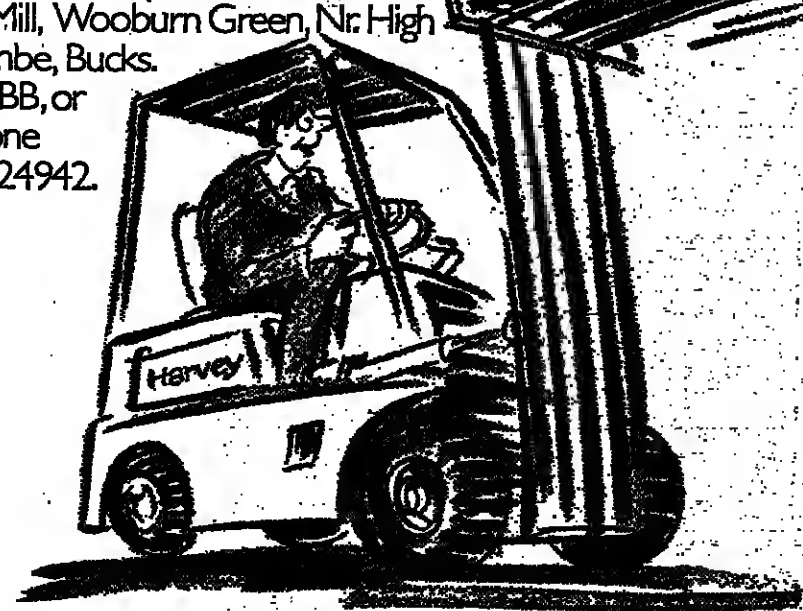
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Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

IN THE OFFICE

Electronics speed the paper work

FORMAL OFFERINGS of office automation systems are being made at an increasing rate: the latest is from Prime Computer and employs the company's 50 Series computer as the basis, backed by the introduction of some new workstations and the use of existing interactive multi-user operating systems and networking software, plus a letter quality printer.

Basically the system will allow the user to create, edit, change and store text, transmit it to other workstations locally or remotely (lately dubbed "electronic mail") and pass documents on with added annotations of his own. Documents that have reached archival status can be dumped on to magnetic tape.

It is also possible to maintain convenient listings such as calendars, personal and staff work schedules, phone messages and reminders of one kind or another.

At the same time the system is able to carry on normal data processing routines.

An unusual facility of the prime system is an electronic dictionary. Thus, in a particular type of work or profession,

up to 60,000 words are held in memory to which the machine can refer for correct spellings. In fact, each word in a new completed document can be checked in this way, automatically. The dictionary is also employed by the system to determine correct hyphenation for right hand margin justification in created text.

Prime has introduced two types of workstation, management and administrative. The former, designated PT 45, works in a buffered mode to allow the transmission of information blocks and provides a broad range of data handling and text editing facilities. It is ideal for applications requiring high speed interactive communications with a host computer.

The administrative workstation, PT 65, is an intelligent editing terminal that can also perform data processing and word processing. It can store programs, information and pages of text in its memory and has user-defined function keys.

To produce the paperwork, Prime has introduced the P 3175 quality printer, a relatively quiet unit working at up to 55 characters/sec. on continuous forms or single sheet paper.

Prime says that it has already made a handful of sales of the new system, one of which is to Bergen Bank in Norway, the country's third largest employing 2,500 people.

It predicts that the world market for office automation systems, now estimated at about \$400m, will rise to somewhere between five and seven billion dollars by 1985.

Prime Computer (UK) is at 1, Lampton Road, Hounslow, Middlesex TW3 1JB (01-672 7400).

HANDLING

Big German excavator

EXPECTED TO be commissioned in the spring of 1983 is a bucket-wheel excavator with a daily capacity of 240,000 cubic metres being built by Krupp Group member company, Buckau R. Wolf, for Rheinische Braunkohlenwerke AG, Cologne. This will be operated at the latter company's open-cast mine at Bembach, near Jülich, where the first excavator of this size has been in operation since September 1978.

Excavator's wheel boom length is 70½ metres; connecting conveyor bridge 103 metres; and discharge conveyor 15½ metres. The 87 metre tall bucket wheel excavator has an overall length of 235 metres and, in operation, weighs 13,500 tonnes including the material being handled.

The 21.6 metre diameter bucket wheel has 18 buckets which are emptied 45 times per minute, each holding 6.6 cubic metres of overburden of lignite, and it takes 3380 kW to drive the wheel alone.

MATERIALS

Coated abrasives from Sweden

PERFORMANCE, long-life and economy are certain qualities promised with a new range of coated abrasives for metal and woodworking operations now available to UK buyers says SlipNaxos (GB), Ryecote Place, Cambridge Street, Aylesbury, Bucks (0296 25888).

The products have become market leaders in Scandinavia where they have been developed by the parent company and are offered in belts, sheets, discs and rolls in a wide range of sizes.

Everything is new in the two basic ranges—800 Series (primarily for metalworking processes) and the Woodworking Series. New backing materials combine strength with flexibility and ease of handling, and include a high quality treated denim-type cloth, tough polyester backing and, for the woodworking applications, six different grades of superior paper backing.

A significant development is the method of applying the grits

to the backing materials which is achieved by using newly designed machinery for electrostatically positioning the individual grains. The method ensures that the grits are positioned to operate at the optimum efficiency, says the company, and also guarantee consistent quality between separate batches.

New formulations have been adopted for the materials that bind the abrasive grits to the backing. Both animal glues and synthetic resins are used in various permutations depending on the use for which the abrasive is designed—varying from a simple glue on glue bonding to two-coats of resins for tougher operations.

The process of jointing continuous abrasive belts is highly specialised and a technique has been evolved to effect a joint which is stronger than the material itself and which is visible only under high magnification.

Investment has also been made in advanced production

equipment to produce outside rolls in widths ranging from 2650 mm down to 5 mm.

New techniques for manufacturing woodworking abrasives have resulted in a product which can be used for both soft woods (when the abrasive will not become blocked) and for hardwoods when the abrasive will continue to sand effectively longer than any other types previously available, claims the maker.

Economies are gained in wood sanding operations because with the new series there is no time-consuming frequent change of material which previously slowed up this work.

The British market for all kinds of abrasives is about £112m and the largest sector is coated abrasives; these are used widely from the smallest car repair workshop to vast motor production lines.

Metal polishing trades and the ever-growing DIY outlets swallow many square miles of belts, sheets and rolls of the material.

New composite tool material

MECHANICAL characteristics, far superior to current alternatives, are being claimed for a new composite tool material introduced by De Beers' Industrial Diamond Division.

It is called Amorbite and is said to be significantly harder than cemented tungsten carbide and alumina ceramics. It is produced by subjecting very fine, carefully graded boron nitride particles to high temperature and pressure in the presence of metal.

The result is a particularly tough tool material with a hardness only slightly lower than polycrystalline diamond. It is especially suitable for machining applications such as the turning of hardened cold work steels, hardened high speed steels and chill cast iron. Amorbite is very much harder than either cemented carbides or ceramics and has the advantage of combining a high degree of toughness with exceptional hot hardness, says De Beers. Amorbite inserts can be used

in standard toolholders and are available chamfered or unchamfered, in both round and square format, 9.52 or 12.7 mm in diameter or edge length. Since the 3.18 mm thick inserts consist entirely of the new material they are reversible, thereby yielding twice as many cutting edges as tungsten carbide backed alternatives.

More details from De Beers Industrial Diamond Division, Chertsey, Sunninghill, Ascot, Berkshire, SL5 8PX. (0999) 23456.

COMPONENTS

Characters can be read from afar

AN UNUSUAL form of the familiar seven segment electronic display is offered by Impactron in which each of the segments is simply a rotating magnetic bar positioned by a magnetic field behind.

The company says that the characters, up to 30 mm high, can be clearly seen at up to 35 metres, each segment being finished in bright reflective yellow. After creating a particular character, no power is consumed until a change is next required.

A minimum of simple moving parts and the absence of filament lamp yields, it is claimed, make for a very long operational life. The use of

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semi-hard magnetic cores for the electromagnets drives allow high velocity character changes from the application of rapid pulse trains.

Two versions are available. Initially with character sizes of 40 x 32 mm and 80 x 32 mm. Each has an integral driver circuit which controls the segments using 16V dc and the units are rated at 0.07 watts.

Impactron is at Foundry Lane, Horsham, Sussex RH11 5PX (0403 50111).

COMMUNICATIONS

Electronic telex system

IT CANNOT be very long now before the conventional telex terminal, essentially a rather noisy automatic typewriter, becomes a thing of the past.

Several alternatives involving visual display screens, silent keyboards and magnetic disc storage have been introduced and now a system called TABS 35 has been launched by Cable and Wireless.

Up to five visual display units, three telex lines and a number of paper tape readers and receiver-only units can be accommodated and the system has comprehensive on-screen editing facilities that allow messages to be prepared quickly and accurately, reducing errors in operation.

As soon as the operator is satisfied that the message on the screen is correct he can enter

it onto the system by pressing a button and it will be stored ready for transmission on a priority basis. A message can be sent to up to 23 locations and TABS 35 has storage capacity for in-transit messages of 750,000 characters using floppy disc drives, or some with a rigid disc.

For messages to countries that do not operate an automatic telex service, the system can be used as a "telex machine" to set up calls in conversational mode.

An interesting enhancement already planned by C and W is a banking version of the system that will include a SWIFT telex interface.

More details from the company at More House, 110 Theobalds Road, London WC1X 8RX (01-242 4433).

DATA PROCESSING

Simple talking computer

TEXAS INSTRUMENTS' U.S. electronics company, has just launched the first talking computer aimed at the home user.

Costing \$990 the computer is claimed to be so simple to use that it can be used by children. TI says that there is no need to even study an instruction manual. All the user needs to do is plug in a special command module and the computer gives instructions for each particular program.

Applications for the computer include education, personal finance, record keeping, and entertainment including chess. The computer can also create animated displays in full colour with music and sound effects.

The computer comes complete with a 14-inch colour television monitor which can also be used

as a conventional television set. So far, TI is offering eight different modules ranging in price from \$16.95 to \$44.95 which include pre-learned learning programmes, record keeping and money management.

Also TI is introducing a talking translator, costing \$130 which gives pronunciation of foreign words, phrases and sentences in Spanish, French, German and English. Unlike the early language translators, this hand held device allows people to learn commonly used expressions.

Recently, Matsushita Electric under its Panasonic brand name also introduced a similar translator without the speech facility costing around £120.

ELAINE WILLIAMS

Selling programs to U.S.

SOME SMALL business system software developed in the UK for use on the new Monroe 2880 programmable desk-top calculator is currently being promoted in the U.S. by Safeguard Business Systems of Liverpool, whose "one-write" documentation system is used in conjunction with the machine.

Safeguard's managing director John Gwilliam believes the technique bridges the gap between totally manual business record/accounting systems and the rather expensive minicomputer solutions.

Use of the Monroe machine, distributed in the UK by Fi-Cord International of Manchester, removes the tedious from complex payroll and accounting routines. The appropriate program cartridge (solid state) is plugged into the top of the machine and an alphanumeric display then guides even inexperienced operators in plain language through the routines needed to fill up the "one-write" sheets. Time savings of up to 66 per cent are claimed.

Safeguard is at Loomer Road, Chester, Cheshire, Staffs ST5 7PX (0782 564326).

Printer for small systems

LAUNCHED BY Centronics Data Computer (UK) is the second of the company's "mini-printers" for the microcomputer-based small business systems market, and a quieter version of the 6000 series line printers.

The small machine, model 737, offers print quality good enough for word processing, performance flexibility for data processing and the ability to print in one of five European character sets. It works at 10 lines per inch, has a nine-wire print head allowing lower case descenders and can print at up to 80 characters per

second. An interesting feature is that under software control the machine will move the paper half a line at a time for subscript and superscript work in mathematics. In addition, right hand margin justification is offered together with double width characters for headlining.

Line printer is the 6080. This has a mechanism that can be field upgraded from 300 to 600 lines/min and it has been equipped with a silencing cabinet reducing the noise level to under 60 dBA.

More from Victoria Way, Burgess Hill, Sussex RH15 9NU (04446 45011).

A streetcar named Desire.

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In fact, once you've become even vaguely familiar with the impressive specification of a 928, it will come as no surprise that service intervals are 12,000 miles apart. Performance? Top speed is circa 140 mph.

0-60 in 7.8, 60-0 in 3.2. Fuel consumption when touring is approximately 25 mpg.*

And as for creature comforts: air conditioning, four speaker Panasonic digital stereo system, power steering, electric aerial, cruise control, automatic or manual transmission are all standard.

Coming in at around £22,000 you'd expect the 928 to leave very little to be desired.

You'd be right.

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Porsche Cars Great Britain Limited, Rotherfield Avenue, Reading RG1 8PH, Telephone 0734 595411.
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The Porsche range includes the 924 Series from £9,104 and the 911 Series from £16,000. Prices correct at time of going to press, exclude number plates and delivery. For further information and details of leasing facilities contact your nearest official Porsche Centre.

*DfT Test Simulated urban driving 17.2 mpg; constant speed 56 mph 26.7 mpg; constant speed 75 mph 21.3 mpg. Metric equivalent: Simulated urban driving 16.4L/100km; constant speed 50km/h 10.8L/100km; constant speed 120km/h 13.3L/100km.

South East: APN Ltd, Isleworth, Tel 01-890 1011, APN Ltd, Guildford, Tel 0483 38448, Charles Follen Ltd, Mayfair, Tel 01-629 6298, Melrose Garage, Billingshurst Ltd, Billingshurst, Tel 040 381 3341.
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The rise of the new 'Red Barons'

Anthony Robinson on today's industrialists in Comecon, where 'profitability is no longer a dirty word'



Edo Horvath, who earlier this month was awarded a State prize in recognition of his contribution to the Hungarian economy.

Impact of new technology or the need to satisfy the customer. Hence the rise of the new 'Red Barons.'

IN RECENT years the penny has dropped. In Eastern Europe, where bureaucrats make bad businessmen, and that entrepreneurship is a very valuable and scarce commodity. The most tangible sign of this is the emergence of a new breed of industrial 'Red Baron'—the closest equivalent yet seen to the more free-wheeling, western-style businessmen. Two of the best known of this new breed are East Germany's Wolf Biermann and Hungary's Ede Horvath.

Both men have carved out for themselves the kind of managerial prerogatives and powers which are the envy of conventional Communist businessmen, tied down by the bureaucratic tape of enterprise planning procedures and political interference.

Dr. Biermann, described in the article below, is the man called in to inject a new sense

of dynamism into Carl Zeiss Jena, the photographic and precision engineering Kombinat (industrial group) which is East Germany's equivalent of Rolls-Royce as the symbol of skill and precision. Horvath is the managing director of Hungary's biggest engineering group RABA, which employs 25,000 people in the town of Győr, and produces a wide range of engineering products, from railway equipment to trucks and machine tools.

Both are heavily export-oriented groups. They are the principal employers in their respective towns and enjoy strong local loyalty from their workforces. This is fortunate, because the kind of methods introduced to raise productivity and instill a system of payment-by-results have swept away much of the comfortable job security and lethargy which is the rule in much of Eastern Europe.

Low productivity and over-manning represent one of the main characteristics of industry throughout Comecon—as the recent UN Economic Commission for Europe report on the Soviet and East European economies pointed out. It is part of a generally inefficient and wasteful use of resources, by-product of a system of rigid central planning which lays down priorities from above.

Under this system prices often bear no direct relationship to costs and the need for effective marketing has long gone unrecognised. Over the last five years or so, however, Comecon countries—the Soviet Union included—have been forced to re-assess their performance under the pressure of higher energy and raw material prices, a growing hard currency debt and the continuing pressures for higher living standards. Now profitability is no longer a dirty word. Inflation has hit Eastern Europe hard, and

managers and workers alike are coming under increasing pressure to raise productivity, economise on the use of energy and materials and raise quality to meet international export standards. This is the general environment which has allowed men like Biermann and Horvath to establish the kind of authority which they now possess—not only over their own workforce but also over the planners and party bosses who hitherto have called the shots.

Significantly, both men wield considerable political influence in their own right and sit on the central committees of their respective communist parties. As such they not only protect their own industrial fiefdoms, but they are also in a position to press for more general application of the kind of economic reforms which transfer a considerable measure of power out of the hands of ministries and central planners into the hands of the men who actually have to produce the goods and sell them on home and world markets.

Hungary has gone furthest down the path of economic reform in Eastern Europe but East Germany—which has reorganised its industrial structure by devolving more powers to some 130 big groups or Kombinate—and the other East European countries are also being forced to give greater powers to their businessmen, including the right to hire and fire with greater freedom than before.

Up to now this process has been stubbornly resisted by the party bosses, who feared that their own powers would be whittled away as a result. But in the high price energy world of the 1980s it is becoming clear that the risks and the rewards are too great to be left to the party functionaries and those whose economic horizons do not take in either the revolutionary

Zeiss under the magnifying glass

Leslie Colitt looks at an East German company tackling international markets



Dr. Wolfgang Biermann: "all that counts is whether we can profitably sell on the international market"

PERSONALITIES are few and far between in the long grey line of East German industrial managers, but Dr. Wolfgang Biermann immediately stands out—and not only as a man who is able to joke with a visiting Westerner as easily as he addresses his fellow members of the Communist Party's Central Committee.

There is no joking with Dr. Biermann when he tours one of the 15 factories of the Carl Zeiss Jena group which he heads. The CZJ Kombinat (industrial group) employs 46,000 people turning out a range of 700 high technology products, lenses to surveying instruments and optical equipment for space research. It is not to be confused with the similarly-named company in West Germany.

Biermann keeps closely in touch with the Jena group's vital research and development work—CZJ employs 5,000 scientists and engineers—as well as with its growing efforts to sell to the West and the OPEC countries. He recently returned from Algeria, for example, as a member of a government delegation that signed long-term industrial co-operation agreements which East Germany hopes will bring it more oil.

As a high-ranking Party official, Biermann has heavy political obligations that leave him little time to enjoy the modest weekend cottage he built in the rolling hills of Thuringia that surround the town of Jena. It does help, though, to be one of the select number of industrial managers in East Germany with access to the country's leader and president, Erich Honecker. Biermann appears to have played an influential role over the last few years in the reorganisation

of East German industry into 129 Kombinate, each of which has a manager at its head and enjoys considerable independence from the government machine.

Biermann has a high reputation in East Germany as a doer. He was brought to CZJ in 1975 at a time when it was having problems with its contribution to the Soviet space programme, the MKF 6 multi-spectral camera for the Soyuz 22 launching in 1976.

Under Biermann's prodding and with the help of what are called "material incentives"—that is, cash bonuses—the prestige project was completed on time, albeit at great cost to the company.

Biermann is alleged to be as tough as a top Western manager when it comes to weeding out subordinates who do not meet his standards, while handsomely rewarding technical and managerial excel-

lence among them. In a recent article for an official publication he noted that CZJ is able to give its employees a "sizeable bonus at the end of the year."

The 52-year-old native of Leipzig is one of the many German engineers—in both East and West—who have risen to direct large industrial firms towards ambitious technological objectives.



In East Germany, the performance of national companies has until now been evaluated mainly by the amount they expanded output each year—a 55-year-old tradition inherited from the Soviet Union—and management's task was largely to ensure that the plan target was fulfilled, regardless of the cost.

Now this is to be radically changed in the face of East Germany's worsening terms of trade. Biermann noted in a recent interview that "all that counts is whether we can profitably sell products on the international market."

According to Biermann, CZJ has an annual turnover of more than 2 bn Marks (some \$1.1bn) and is profitable. Sixty per cent of its output is exported, with 80 per cent going to other Comecon countries and 20 per cent to the West. Within Comecon, one-half of CZJ's exports go to the Soviet Union.

The pre-socialist Carl Zeiss firm in Jena was paternalistic towards its employees—not unlike the Krupp company—and built housing for the workers and managers, sports facilities and a large part of Jena University. Carl Zeiss, the founder, a mechanic, recruited a director who proceeded to invest the company's profits in local property. Before the Second World War half of Jena is said to have been owned by the Zeiss works.

Today Biermann is considerably more influential than the mayor of Jena and CZJ continues to provide housing for its workers along with nearby creches for the children of the 18,000 women workers, plus recreation homes, sports facilities and the rest.

One result of all this care is that labour fluctuation at CZJ is a low 5 per cent, compared with a much higher rate in other East German companies. The same story is told by directors of Western firms located in provincial towns where company allegiance still runs high.

Workers at CZJ earn between 600 and 900 marks monthly depending on their qualifications. Not long ago, even mentioning the name of the West German Carl Zeiss company produced violent reactions from East German officials. In 1945, most of the plant and equipment of Carl Zeiss that survived in Jena was dismantled and sent to the Soviet Union as reparations. When the company was nationalised in 1948, the Carl Zeiss management fled to West Germany, as well as a good number of skilled personnel

with their invaluable scientific and technical know-how, and set up the rival Carl Zeiss firm in Oberkochen. One executive at CZJ says his company has only one real competitor with a similar breadth of products: Carl Zeiss in West Germany.

Inside the Jena plant which produces surveying instruments, Biermann proudly demonstrates the company's electro-optical tachometer, the EOT 2000 which is every few hours, the degree of orderliness is well above that found in most East German plants. Appropriately, signs

urging workers to maintain Ordnung und Sicherheit (order and safety) are posted everywhere. Several signs also attack NATO and one wall illustrates the development of the East German People's Army over the past 24 years.

Biermann hints that some of the products turned out by CZJ also have military applications. From a height of 250 kilometres, he explains, the MKF 6 photoreconnaissance camera can detect an object three metres long. "We can see what is a real forest and what isn't and we can find out what is camouflage and what is not."

Among the more novel projects CZJ has undertaken abroad is a planetarium being completed in Tripoli together with a Swedish construction company. At the Soviet cosmonaut training centre, a special Zeiss space planetarium is used

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DELTA IS READY WHEN YOU ARE

Which projects shall we stop?

BY DAVID FISHLOCK

WHY DO WE need a chief scientific adviser to the government? An eminent engineer asked a few years ago. Most of its technical problems are engineering problems.

In fact, the post was abolished in 1974, when Sir Alan Cottrell returned to Cambridge. But for the past few years the government has been advised by a wide-ranging group of scientists and engineers. Known as the Advisory Council on Applied Research and Development (ACARD), its chairman is Dr. Alfred Spinks, chairman of Charter Consolidated, a pharmaceutical and until a year ago research director of ICI.

Advisory

ACARD's role is precisely what its title suggests—an advisory one. It has no budget. It can only argue a case for someone else to do something to put right a wrong, fill a gap or foresee a Britain's industrial armory a few years ahead.

ACARD has now been the prime mover behind a series of seven reports in the past 18 months on major weaknesses in Britain's technological base. These recognise that most of the problems are engineering—and political—problems, not scientific ones. They are clear, often pitiful reports, aimed above all at politicians.

A recurring theme is the blunt fact that Britain cannot hope to support advanced technologies—the fruits of its big research effort—on its domestic market. War and again since World War Two it has tailored its technology so closely to the domestic market as to exclude hopes of exports. The list, depressingly long, includes aircraft, weapons systems, nuclear reactors, telephone switching systems, bovinecraft, and now the advanced passenger train.

Each one, to quote an ACARD comment on the advanced passenger train, can justifiably claim to have been "a magnificent piece of engineering." But to say, as some are now saying about the worldwide commercial success of the American pressurised water, that "it's just Westinghouse marketing," is to make ACARD's point very precisely.

ACARD scored a big success with its first report, on the need for Britain to move fast if it wanted a front seat in micro-

miniature electronics, the "enabling" technology behind all advanced systems. The Government responded quickly, galvanising the private sector into decisions. If Government now gets out of micro-electronics it will be because it has done its job.

ACARD may score another success with its latest report, on biotechnology. Again the National Enterprise Board is the "angel," apparently prepared to fund research-based company to pursue genetic engineering into the marketplace.

But sandwiched between these two reports came another five dealing with technical problems which permeate the whole of British industry, hitherto all efforts to compete overseas. Some call for changes only Government—and a courageous one to boot—can attempt to implement. Some call for cash; modest amounts here and there, to "seed" new ventures and something to make the research effort more effective. All suggest an urgent need to work out a very clear sense of national priorities.

National priorities in the technical sector suggest that industry and government might make wider and more constructive use of public cash at a time of tough constraints on public spending. It knows its best way of winning cash for new projects is to uncover old ones that should be stopped.

Dr. Spinks even had the temerity to suggest that ACARD should do a report advising Government which research and development projects to stop. He admits ruefully that, among its 15 members, every project forward found someone willing to defend to the death its right to survive.

Sympathetic

"Why don't we cut the £62m spent on medical research last year by the Medical Research Council?" After the big advances in public health all come from the privately-owned drug companies, don't they? Wait a moment. Isn't the MRC funding the Cambridge research behind one of our most promising lines of genetic engineering?

Anyone with a cogent case to argue for chopping a government funded research and development project could find a sympathetic ear in this office.

7.00 Young Musician of the Year
7.30 Life on Earth
8.30 The Time of My Life
8.40 Nine O'Clock News
9.25 Kelly Montell: a comic's life
9.50 International Skating Gala at Richmond Ice Ring
10.30 All Glorious Clocks: film about composer György Ligeti
11.15 Platform One
11.45-11.50 News Headlines
All Regional programmes as BBC-1 except as follows:
Cymru/Wales—5.10-5.40 pm Rilldownar, 5.55-6.20 Wales Today, 6.20-6.30 Tom and Jerry, 6.30-7.00 Heddli, 11.45 News and Weather for Wales
Scotland—12.40-12.45 pm Scottish News, 5.55-6.20 Reporting Scotland, 10.30-11.00 Current Account, 11.00-11.50 Marco Polo

RACING
BY DOMINIC WIGAN

fails to underline her Guinness prospects in the Elveden Maiden Stakes.

A daughter of Mey, whose sire, Canisbay, gave the Queen an unexpected Eclipse Stakes victory, Restful made only one appearance as a juvenile, in the Rose of Lancaster Stakes at Haydock. But she showed

Commitment to a powerful medium

THE BRITISH public has recently been reading of proposals made by Sir Derek Rayner, joint Managing Director of Marks and Spencer, to cut out a senior grade in the Civil Service and streamline the Whitehall hierarchy. The same public has also been watching a comedy television series, *Yes Minister*, which has behind its acerbic wit about the way Civil Servants really govern politicians, an uncomfortable sense of credibility.

We may never know what influence the fictional series will have on the adoption of the real-life proposals—but my own guess is that it will be significant.

Film and television can strike the emotional centre of issues, as Lord Carrington and the Saudi Arabian Government must ruefully agree after the events of the past week. Feelings and attitudes are stirred, shaped, even re-directed by the mere believability of a well-made film. Behind the craft and the art, which uses photography, music, sound effects and an edited pace of presentation, is an unconscious urge to immerse the viewer in the totality of what is happening on the screen; nothing else matters.

It has been a frequent dream of mine that industry and government might make wider and more constructive use of this unique power. What special

benefits could emerge right now from some well-made, well-aimed films?

Well, on the industrial front, one name comes instantly to mind: British Leyland. In improving industrial relations or just achieving a simple employee understanding of complex issues, the possibilities with film and television—intelligently handled—are enormous. In restoring confidence in the product, perhaps an even bigger job faces the company.

One small but significant start has been made by the group, with a film designed for the launch of the new T4 Renault truck. For Leyland Vehicles, this new transporter is an important product which embodies considerable customer appeal. The film has the difficult task of focusing belief in this new truck and arousing a sense of one-upmanship about it.

The method chosen is a fictional account of a delivery job using a T45, where a rival Volvo truck is also trying to get to the same destination first in order to compete for a return load. The film is loaded with a rugged working-class touch—but also with a deft skill in slipping in selling points that follow rather than manipulate the story.

We know it is all a cinematic confidence trick, handled lightly in tongue in cheek. But it is done so adroitly, just like *Yes*

Minister, that none the less we believe it in the end.

Whatever mid Leyland trucks will have to drive through in restoring customer confidence, this film in 20 minutes will do a lot to clean up the route ahead. But why stop at that, Sir Michael, with a product that needs less help than some of the others? It is rare indeed to see any kind of film from B.L.

FILM AND VIDEO

BY JOHN CHITTOCK

Yet there are some organisations which use film as an essential part of their job. Such is the Health and Safety Executive, which is emerging as one of Britain's more intelligent and vigorous sponsors of film. Their latest exemplifies the point very well: title, *Knock-Down Price*. It again uses the fictional story-line approach to show how, by cutting safety corners, a demolition contractor wins a price tender but loses a worker under a collapsing wall.

This film again is effective because it is believable. Yet it strikes deeper than any credibility. It uses that subtle skills of the film-maker to sharpen the attention of the viewer; to point the mind in the intended direction.

sale or rental to insurance companies. It is intended for use in "training" and motivating staff. More poignantly, it is also a very effective film for selling life insurance.

The story is unexceptional: happy family with three children, young husband suddenly dies, and there follows a chain of financial and domestic events that lead to social misery—because, of course, there was no life insurance and the wife is left penniless.

It sounds very little. But excellent scripting and direction have created a film which, by the end, the audience is immersed in the deepest emotional level. After its preview, it left the Press in

a pensive frame of mind. Could a pamphlet, a lecture, even a TV commercial, ever achieve so much?

These films all follow the current trend of abandoning the documentary style and placing faith in dramatised stories with professional actors. It is a trend I personally dislike because there is no substitute for reality in motivating an audience.

Nonetheless, here are three rare cases where the style works very well.

I cannot say quite the same for two new training films from Guild Sound and Vision. *Finding New Customers* is the story of a young salesman who fails to work hard enough at getting new business; and *Appointment Only* is another salesman's tale about the importance of arranging appointments and not calling on clients unexpectedly.

Both are executed with confidence and finished with polish. Both have great relevance for their intended audiences, even if the message in the second one is rather laboured. But they lack the believability, like so many training films, it is synthetic, pre-packaged learning set in a world which looks right but feels wrong.

Where learning without motivation is accepted, tape-slide programmes may be good enough. A company in Stockport—Fotopoint—has used techniques similar to tape-slide to make a programme about the

law of patents, but for convenience in viewing it is available on film and videocassettes. It is a very simple affair, relying on inanimate drawings but a lucid commentary to provide a businessman's introduction to the subject. Apart from some rubbishy music, I found it effective for those who want a crash course in the subject.

The essential difference between doing a simple method of production like this, and say, the sophistication of Leyland's truck film, lies in the audience's commitment. Those who really want to know about patents will be satisfied with raw data in a simple presentation. But if an audience is indifferent, or worse, suspicious, it needs every beguiling trick of the cinema to win their attention and belief.

Such is the power of film—mostly under-used and under-exploited by industry, and misapplied when it is used. When it goes wrong, which is more frequent than the current batch of films would suggest, the fault is often something to do with commitment.

The sponsor imagines that the audience will share his commitment to the subject and need no encouragement. He will sometimes insistently destroy the commitment of the film-maker during production, and through bad experiences of his own making, he will lose all further commitment to this powerful medium.

Restful to win for the Queen

RESTFUL, the subject of two or three substantial 1000 Guineaes bets struck by well-informed ante-post backers, makes her reappearance at Newmarket today.

The Queen's once-raced Ribblesdale is a good deal more forward than most of the second season fillies at West Hildesley and I shall be disappointed if she

enough to be earmarked for classic consideration.

Hampered in the early stages of that extended seven-furlong event, Restful ete up the ground in the final quarter mile and at the line had just a neck to make up on Millingdale Lillie. Her conqueror (the likely 1000 Guineaes mount for Pigeon) later ran away with the Clarence House Stakes before falling by the minimum distance to hold Mrs. Penny in the Cheveley Park Stakes.

Restful, whose dam is a half-sister to Albany and Magna Carta, has been working as well as any at West Hildesley in recent weeks and she will not be found wanting for fitness. She is taken to be a good deal more of a clear-cut success story, some well-bred opponents including Brunel's half-sister Princess Matilda, a brown filly by Habibat out of Bombazine.

Earlier in the afternoon a reputation may be made and a number severely dented as a sequel to the Ladbrooke-sponsored Craven Stakes. Here I intend taking a chance with the 1000 Guineaes mount, World Leader, who impressed me on the July Course in August when forging clear of Highland Light to win an 18-runner maiden event easily.

Although he was subsequently a disappointing second favourite for the Laurent Perrier Champagne Stakes at Doncaster, I suspect that for one reason or another he did not run up to his true ability on Town Moor.

RACING
BY DOMINIC WIGAN

fails to underline her Guinness prospects in the Elveden Maiden Stakes.

A daughter of Mey, whose sire, Canisbay, gave the Queen an unexpected Eclipse Stakes victory, Restful made only one appearance as a juvenile, in the Rose of Lancaster Stakes at Haydock. But she showed

Highlights from the American Oscar ceremony, 12.15

All ITV regions as London except at the following times:—

ANGLIA
9.25 am Kocuzko, 10.15 The George Hamilton IV, 11.00 You Can Make It, 11.05 Country Comes West, 11.30 Frontiers of Discovery, 1.25 pm Anglia News, 2.00 The People's Choice, 2.30 You're the People's Choice, 12.00 am Night Flight, 12.30 You Have A Minute Left.

ATV
6.30 am Something Different, 6.45 Sesame Street, 10.45 am Peggy, Royal 1.20 pm News, 1.25 pm News, 1.30 pm News, 1.35 pm News, 1.40 pm News, 1.45 pm News, 1.50 pm News, 1.55 pm News, 2.00 pm News, 2.05 pm News, 2.10 pm News, 2.15 pm News, 2.20 pm News, 2.25 pm News, 2.30 pm News, 2.35 pm News, 2.40 pm News, 2.45 pm News, 2.50 pm News, 2.55 pm News, 3.00 pm News, 3.05 pm News, 3.10 pm News, 3.15 pm News, 3.20 pm News, 3.25 pm News, 3.30 pm News, 3.35 pm News, 3.40 pm News, 3.45 pm News, 3.50 pm News, 3.55 pm News, 4.00 pm News, 4.05 pm News, 4.10 pm News, 4.15 pm News, 4.20 pm News, 4.25 pm News, 4.30 pm News, 4.35 pm News, 4.40 pm News, 4.45 pm News, 4.50 pm News, 4.55 pm News, 5.00 pm News, 5.05 pm News, 5.10 pm News, 5.15 pm News, 5.20 pm News, 5.25 pm News, 5.30 pm News, 5.35 pm News, 5.40 pm News, 5.45 pm News, 5.50 pm News, 5.55 pm News, 6.00 pm News, 6.05 pm News, 6.10 pm News, 6.15 pm News, 6.20 pm News, 6.25 pm News, 6.30 pm News, 6.35 pm News, 6.40 pm News, 6.45 pm News, 6.50 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THE ARTS

Royal Hall

Celibidache

by RICHARD JOSEPH

On Sunday evening at the Festival Hall the London Symphony Orchestra gave the second of two concerts with Sergiu Celibidache prior to their tour of the Far East. It's about two years since orchestra and conductor first met and the collaboration between them has steadily matured.

Salient features include a great range of nuance and contrast in both dynamics and internal balance, and a sense of interpretive freedom and spontaneity rarely achieved on the London orchestral treadmill. The brass and percussion sections play quietly, fully integrated into the overall texture, the wind soloists are encouraged to phrase with imagination and daring, and the strings' tone production is refined and transparent.

All of these qualities are achieved through playing at a somewhat lower volume than is customary, and a lack of visceral impact to the sound seems to be the chief source of criticism of Celibidache's work.

That within this overall dynamic level tremendous variety can be achieved was nowhere more apparent than in the passionately lyrical, untidant performance of Brahms' First Symphony that concluded the programme. Rich rising sonorities that never became merely glutinous always left acoustic space for the wind and brass to speak freely, with-

out forcing their tone. As a consequence, reserves of sound were easily hushed for a finale in which the orchestra's steeply terraced crescendo created a feeling of spaciousness rarely encountered in more demonstrative performances. Despite slow speeds, Celibidache's of harmonic tension and unobtrusive rhythmic flexibility enabled him to present the symphony as a linear argument, and so avoid the cheap rhetorical devices that plague most interpretations of this admittedly flawed but enterprising work.

Before the interval, keen rhythmic pointing and an idiomatic application of agogic accents distinguished Kodaly's Dances of Galanta even though it was played at speeds slower than those indicated by the composer. Ravel's scrupulous orchestral palate in the Mother Goose Suite suited Celibidache down to the ground; the composer's impeccable balances were beautifully voiced.

Whatever reservations one may entertain, it should be emphasised that work of this imaginative calibre and technical finish rarely occurs in orchestral life. One hopes that the collaboration between the London Symphony and this remarkable musician will continue, and in the future include some of the supposedly "difficult" works that Celibidache has studied, such as Schoenberg's Orchestral Variations, op. 31.



Decameron by Waterhouse

Royal Academy

Lord Leverhulme's pictures...

by WILLIAM PACKER

Old prejudices die hard. Even now we are inclined to allow not only the artists themselves but also the magnates and patrons of late Victorian and Edwardian times, who sustained them with so much more generosity and active interest than is the rule today, scant justice for their taste and discrimination. So much of the painting we still find over-literary and sentimental, and if we confess to enjoying it at all we are likely to do so with a defensive sense of self-indulgence. In spite of all the evidence to the contrary, we remain strangely reluctant to concede that there was indeed such a beast as a great Victorian architect, or craftsman, or designer.

The civic and philanthropic institutions wished upon the public in those days to house such stuff, in Birmingham, for example, in Manchester and Newcastle, the Walker Gallery in Liverpool and the Lady Lever Gallery at Port Sunlight, though not now notorious exactly, are hardly as celebrated as they should be. We make allowances, and enter special pleas to excuse ourselves from breaking down those old, comfortable, complacent judgments.

It comes as a salutary shock, therefore, to enter an exhibition devoted to the collections built up by William Lever, the first Lord Leverhulme (in the

Fine Rooms of the Royal Academy until May 25), and find oneself surrounded by an extraordinary jumble of splendid things. Here, after all, is the memorial to the refined sensibility of the archetypal self-made man, grocer turned soap-maker, turned millionaire; and certainly our expectations are defied. It does not matter at all that Leverhulme bought in the first instance for purely commercial reasons, acquiring works that could be used readily to advertise and market his product, nor that such overt commercialism resurfaced at intervals. He was simply a born collector who displayed a fine discrimination across a number of quite separate fields, ceramics and furniture as well as fine art, and once under way he was unlikely to stop.

He did not confine himself at all to the work of his own time, his interest in English 18th century painting here marked, among other things, by two large full-length Reynolds ladies, Elizabeth Canning and Mrs. Beckford, both of them in the grand classical manner, a small Gainsborough, Duchess, a lovely three-quarter length Hogarth, yet another Duchess. And there is a splendid, proto-expressionist Constable, a storm-bound Suffolk cottage the rude vigour of which is in no way diminished by the doubts once expressed concerning its authenticity.

He also built up important collections of furniture of all periods, of which a fine group of 18th-century items is shown, and of ceramics, including comprehensive collections of Wedgwood and of Chinese porcelain, beautifully represented here.

But of course he collected modern works of art too, and they give the exhibition, and by inference the Lever collection as a whole, its peculiar flavour. For the point is how well it all comes together, how happily it sits; it all makes sense. We move from the pictures to the porcelain to the furniture without sensing any incongruity.

We can comprehend perfectly well that all these things should have been enjoyed and brought together by one man; and the Victorian and Edwardian works, Academy pictures though so many of them are, do hold their own—which is not to say that they are necessarily masterpieces but rather that they earn serious consideration at last, good things well worth having around. And the best of them are very good indeed.

Millais, for example, is a significant but oddly underrated artist, largely the fault of his astonishing precocity, his success with the pre-Raphaelites, and his subsequent apostasy. As a portrait-painter, the missing link as it were between

Lawrence and Sargent, he has never been given his due; and here we see one of his late figure paintings, flawed by its sentimentality admittedly but no more so than the Romney next door, and full of interesting and lively painting.

Bouffier's Lock by Edward Gregory is also here, last seen in London at Somerset House three years ago, a documentary tour de force of great charm, worthy of Tissot, painted with a lively delicacy and a wonderful exactitude of circumstantial detail for anyone who knows the lower Berkshire reaches of the Thames.

There are besides, and excellent large Sargent of a boy fishing, beside a Norwegian torrent, a characteristically suggestive Orchardson, two small and deliciously heady pictures of overheated Roman girls by Alma-Tadema, two important large Burne-Jones, a very good Waterhouse of the telling of the Decameron, and so the list goes on.

The whole exhibition, in short, is yet another demonstration of the old truth, which is too seldom acknowledged: that good things can be trusted to get along with other good things, no matter how different in kind they might be. It is an exhibition to be enjoyed not only in detail, piece by piece, but altogether, moving through it itself a pleasure.

Cheltenham Town Hall

Siege of Corinth

Higham Court Opera Week-end, directed by Roger Smith and April Cantelo in the mansion near Gloucester, once owned by Sir Robert Part, where they aim to create a centre for music and its sister arts, has given a number of public concert performances. Operas tackled during the last three years include *Idomeneo*, *Fidelio*, *Eugene Onegin* and *Les Rois de France*, each in the repertoire of one or other of our national companies. With Rossini's *Siege of Corinth*, Higham was, quite literally, breaking new ground. In none of its various forms—the two-act *Maometto II*, first given at Naples in 1820; *Le Siege de Corinthe* expanded into three acts and virtually rewritten to a French text for the Paris Opera in 1836; or, translated back into Italian and staged, as *L'assedio di Corinto*, at Parma two years later—does Rossini's opera appear to have received a professional performance in the UK.

At Cheltenham Town Hall on Sunday, Higham presented *L'assedio di Corinto*, singing the opera in Italian while interposing a spoken narration in English between the musical numbers. Contemporary criticism of *Le Siege* (and *L'assedio*), which was Rossini's first setting of a French text, accused the composer of eliding out to the German-inspired, orchestra-dominated fashion, but nevertheless praised the music for its "modesty assumed the part of a model crescendo-dual to the second act. Though the orchestration is indubitably heavy by the standards of the previous decade, much delicate scoring remains, especially for the woodwind."

The display arias, still fear-somely decorated, integrate better with the score, as, for example, Neocle's scena, with its off-stage prayer for soprano and women's chorus between the two sections.

Then there are the trios: the plot, with its conflict between patriotism and love—Pamira, daughter of Cleonora, Greek governor of Corinth, loves Mahomet, who reciprocates her feelings, but not strongly enough to spare her countrymen—leads itself to trios, and there is a magnificent one in each act.

The Higham performance, thoroughly well-prepared and energetically conducted by Roger Smith, gave considerable pleasure. The orchestra was adequately disciplined; the chorus, alert in attack, sang its rewarding music with impartial enjoyment of Turkish wedding hymn or Greek patriotic song. Among the soloists, Maween Lebane, in the travesty role of Neocle, young Greek commander, stood out for the stylishness of her singing. Sara de L'assedio di Corinto, singing the opera in Italian while interposing a spoken narration in English between the musical numbers, was a touching, sweet-toned Pamira, though she could not dominate the big numbers. Contemporary criticism of *Le Siege* (and *L'assedio*), which was Rossini's first setting of a French text, accused the composer of eliding out to the German-inspired, orchestra-dominated fashion, but nevertheless praised the music for its "modesty assumed the part of a model crescendo-dual to the second act. Though the orchestration is indubitably heavy by the standards of the previous decade, much delicate scoring remains, especially for the woodwind."

ELIZABETH FORBES

Elizabeth Hall

Nash Ensemble

by DAVID MURRAY

Very neatly planned concert Sunday night, very tepid in performance. Why? There was the first London hearing of Elliott Carter's dual cantata *Syrinx*, and the British premiere of a fluent octet commissioned from Paul Patterson, "At the still point of the turning world," with Samuel Barber, Ives and Copland to back them up. The climate remained in temperately mild, Sarah Walker delivered Barber's *Dover Beach* with much more tact than old-fashioned passion—a tactical error which threw the fault in Barber's prosody unkindly into relief—against a self-effacing sifting accompaniment, not the strong quartet-voice that should have answered her. Copland's lovable *Appalachian Spring*, conducted by Lionel Friend in its first (and best) version for just 13 instruments, lost its honest open-air breadth through sentimentally slow tempi and undernourished strings.

Under the circumstances, it may be that Patterson's chamber piece creates an unfairly mild impression. In a casually mellifluous way, it played its four winds off against its four strings very much as expected, solo in-

struments duly highlighted with idiomatic writing as grateful to play, no doubt, as it was tacitly predictable to hear. Perhaps there is higher drama latent in it: the "still point of the turning world" seemed here to be a place of late Impressionist harmony, innocent even of Eliot's "hidden laughter of children in the foliage," let alone "the trilling wire in the blood." Patterson's middle section suggested nothing so electrical and so the outer poles seemed inert. By comparison with the blithe Octet is crammed with musical events.

I have often admired Mr. Friend's skill at sorting out dense contemporary scores, and the thickets of Carter's *Syrinx* at least seemed well weeded. Such dramatic force as its criss-crossing lines may possess remained notional, all the same; I suspect that Carter intended a holder and simpler-sounding result—though perhaps it can be achieved only after many performances. Both the whole and the parts look dauntingly complex, but much of that is a matter of notation, required to keep the continual metrical counterpoints in order. We could have done with a higher dynamic profile and more empathic divisions. This is not one of Carter's ultra-polypionic scores, full of disjunct individual voices. Here the singers are paramount, with the four strings—like the trio of low woodwinds—often treated as dense contemporary scores, and the thickets of Carter's *Syrinx* at least seemed well weeded.

Syrinx is based on a witty, ruminative Orpheus poem by John Ashberry, set for mezzo-soprano, with an oblique bass commentary drawn from classical Greek texts. Miss Walker was coolly poised with the English (and notably accurate "in pitch"), without quite dominating the work as is needed; David Wilson-Johnson supplied the hoarse antique bark and florid declamation with generalised conviction. Now and again, a point of musical consequence struck home, and a broad musical perspective came momentarily into focus; the rest was merely interesting, a soft-voiced Babel in which there was too little guide for the ear. There will surely be a time when the Nash players can seize the music by the throat and show us what it's about. With *Levi: The Unanswered Question*—an incoherent foil for the Carter—they had gently and firmly done just that.

... and the buildings around them

There is no doubt that Lord Leverhulme was an architect by inclination, if not by profession. "I have always wished that I had been an architect," he once said. Ironically, few architects could have achieved what he, as an enlightened and munificent patron, was able to carry through.

The tally of his building projects on show at the Royal Academy is stupendous. Two are villages, Port Sunlight and Thornton Hough, one for the employees of the Lever Brothers soap-works tannery of Unilever, who have sponsored this exhibition; the other its country cousin, an estate village entirely rural in its attributes. Both share the relaxed "Domestic Revival" architecture, a polished blend of traditional materials and pared historic styles; but Port Sunlight was a planned village on a considerable scale; the plan seems to have been largely Lever's own while Thornton Hough had to accommodate itself around the earlier elements of a mid-Victorian estate village.

On the ground there is little doubt that the latter approach

is the more successful; at Port Sunlight the plan looms large and the cottages sit uneasily between a lovely three-quarter length Hopper, yet another Duchess. And there is a splendid, proto-expressionist Constable, a storm-bound Suffolk cottage the rude vigour of which is in no way diminished by the doubts once expressed concerning its authenticity.

Lever's approach to his own housing was a constant search for the setting that would contain, and flatter, his growing collection of works of art. His houses were more museum than home and there were many—13 from the time of his marriage. With the houses, which followed the same Domestic Revival path as the villages but were appropriately elaborate variants, went fine gardens, one of which—little known—is at The Hill, Hampstead, now belongs partly to the GLC.

Other projects included the renovation of historic buildings, such as the Hall-in-the-Wood, Bolton, and a pair of cruck barns reconstructed in Lever

Park, on the Rivington estate between Bolton and Liverpool. Lever Park also housed his recreation of long-gone Liverpool Castle and above it his own Raynton Cottage (or The Bungalow), complete with a dramatic sequence of hanging gardens.

Abrud, Lever had extensive projects in the Belgian Congo. In his last years his attention switched to the Western Isles. As the years went by the projects became wilder and correspondingly less successful.

For the many architects he employed, too numerous to enumerate, he must have been both exasperating and inspir-

ing. Many of them endured his interference and found him more collaborator than employer. Certainly, working for Lever it must have been anybody's guess what the next day's work would be. Once he had a project in mind he applied himself to its fruition with much of the energy and dogmatism that made him the consummate businessman he was.

In his opinion there was "no career" that opens up such immense possibilities for influencing the world in which we live as that of the architect. Not, one might add, unless the "career" is that of patron.

GILLIAN DARLEY

Northern Arts feasibility studies

Northern Arts management committee has announced that they are to allocate up to £1,000 for feasibility studies designed to boost audiences at arts events by introducing "subscription selling schemes."

The money will pay for studies for three of the region's chief arts organisations, the Northern Sinfonia Orchestra, the Forum Theatre in Billin-

ham and the Tyneside Cinema in Newcastle.

This initiative is part of Northern Arts' re-examination of its marketing and promotional schemes. Northern Arts director David Dugan said: "Given the inevitability of financial restraint in the arts, it is imperative that no opportunity for increasing audiences is lost."

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OPEC, unemployment, Détente and World War III?

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Allies must consult

THERE ARE two reasons why Britain and the other western European countries should go along with President Carter's call for joint economic sanctions against Iran. The first is that coordinated action by the West may induce the Iranian authorities to release the hostages; the second, and more important reason is that moderate action by all the members of the western alliance may avert the danger that Washington, acting on its own, could feel driven to take more extreme and more dangerous steps.

No-one can be at all sure that economic sanctions against Iran will lead to the release of the hostages—that is why European governments have been so reluctant to adopt a hostile posture towards a country with which they have no direct, national quarrel. The political priorities espoused by the Ayatollah Khomeini and by the militants at the U.S. Embassy in Tehran do not suggest that they would be particularly sensitive to such a threat. Attempts by President Bani Sadr to have the hostages transferred from the custody of the militants to that of the government have been rebuffed by Khomeini. Given the unpredictable nature of the political processes at work in Iran, and the prevalence of xenophobia against the Americans in particular, one cannot rule out the possibility that external economic pressure will actually harden the attitude of the Ayatollah and his followers.

Condemnation

It can also be argued that the imposition of co-ordinated economic sanctions by the west could be dangerous in terms of the political stability of the region. It is undoubtedly premature to assume that the Iranians would respond by seeking closer links with the Soviet Union, since they have already made explicit their condemnation of the Soviet invasion of Afghanistan. But the west has no desire for, and no interest in, any prolonged quarrel with Iran, once the hostage problem is solved. Some would therefore argue that the best strategy is to play a waiting game based on diplomacy and persuasion, so as to avoid any action which could jeopardise the safety of the hostages or reinforce the anti-western feelings of the Iranian clergy.

The trouble with this line of

argument is not merely that it leaves out of account the fact that quiet diplomacy and persuasion have been tried for many months now, without producing any perceptible result at all; more important it also leaves out of account the position of the United States.

President Carter has so far shown exemplary patience and restraint, and has done his best to avoid any precipitate or unconsidered action. But his patience and restraint cannot be inexhaustible, and the constant pressure from public opinion for effective action is only intensified by the fact that this is an election year.

Grave dangers

Economic sanctions may or may not succeed in bringing about the release of the hostages; but the one thing that is absolutely certain is that they will not have any effect on the attitude of the Iranian authorities if they are imposed by the United States alone. Indeed, there are grave dangers in standing aside while the U.S. attempts to impose trade sanctions on its own. As soon as it became apparent that the American measures were not having any effect, President Carter would come under renewed pressure from public opinion to take even more extreme steps, and the more extreme the steps he might be forced to contemplate, the greater the risk to peace in the region or in the world at large. It is not difficult to see the enormous dangers that could accompany the use of force against Iran; but American officials have repeatedly warned that the use of force has not been ruled out.

The advantages of co-ordinated economic sanctions against Iran by all the members of the alliance is that the pressure can be more moderate, more controlled and less dangerous. But the corollary of such joint action must be an undertaking by the United States that it will not take any additional measures of its own without prior consultation and agreement in the alliance. Consultation has not, hitherto, been Washington's strong point on this issue. Britain and America's other allies must make clear, therefore, is that effective consultation is the prerequisite to any kind of joint action.

Comparing like with unlike

IN PROMISING to honour the results of the public sector pay comparability studies which were initiated by the last administration in a last-ditch attempt to buy industrial peace before the General Election, the Conservative Government accepted a poisoned chalice. At the time, the Conservatives may have thought that comparability would prove more digestible than an explicit public sector pay policy and less dangerous than direct confrontation with powerful groups of public servants. But the reports of the Clegg Commission on pay comparability have made it increasingly apparent that kind of pay research is likely to be a crippling, expensive, and, at the same time, ineffective in mollifying the public sector unions.

The perils

Although the total cost of the Clegg awards will be around £3ha, and although Clegg has produced numerous pay increases well above the average rate of pay inflation, his findings have not come up to the unions' expectations. This does not mean that comparability has proved a relatively cheap way of buying off public sector workers. On the contrary, the promises of comparability studies have generated totally unjustifiable hopes of the re-establishment of relative pay levels prevailing in 1974-75.

The Clegg report on teachers' pay which was published yesterday, provides the clearest evidence so far of the perils of basing public sector pay on comparability. After conducting a number of detailed comparability studies, which suggested changes ranging from 50 per cent to minus 27 per cent for various grades of teachers and lecturers, the Commission concluded that its results were so inconsistent as to be useless. It opted instead for a comparison between the salaries of young graduates in teaching and in other occupations, including industry and commerce. The result was a proposed average pay increase of 18.2 per cent, with a range of 12 to 25 per cent to help restore differentials.

Given that there is widespread agreement that too

many of Britain's best young graduates are moving into jobs in the public sector, rather than in commerce and industry, it is particularly surprising that the Clegg Commission suggests basing the whole structure of teachers' salaries on the establishment of equality between young graduates in teaching and in industry.

Numerous intangible factors in many forms of public service employment, make pay comparability in the public sector especially irrelevant. For example, the Clegg Commission's assertion that secondary school teachers spend 41 hours per week, averaged over 46 weeks a year, working, and therefore that "no adjustment is warranted" to take account of their long holidays, is extremely misleading. There may be many individuals who would willingly trade part of their pay, or work overtime, in exchange for longer holidays. For others, the opposite may be true. But the point is that such comparisons cannot be made by a Commission's subjective judgment.

The only way of establishing the real trade-off between pay and intangibles, such as holidays, security, employment conditions, personal satisfaction and even, perhaps, index-linked pensions, is through the labour market. The investigation of supply and demand should be the starting point of any assessment of public sector pay. In principle, it is only in its effect on the supply of suitable candidates that comparability is important. The Clegg Commission, instead has chosen to relegate the market to a mere four paragraphs.

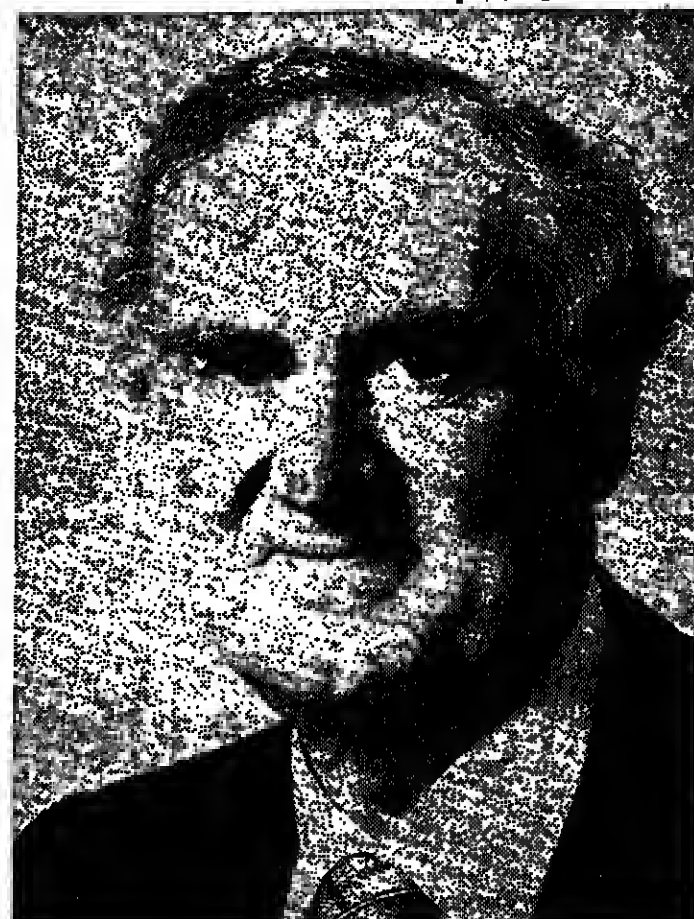
The significance

Even in these the Commission manages to misinterpret the significance of market forces. It believes, for instance, that the surplus of teachers does not invalidate its comparisons, partly because there are shortages of teachers in certain subjects. But the shortages of mathematics and science teachers, do not apparently justify separate salary scales in these subjects. Before the next pay round the Government will need to develop a more coherent, and market-oriented approach to public sector pay bargaining.

BRITAIN'S NUCLEAR REACTOR POLICY: TIME FOR A DECISION

Safety first if we switch from AGR to PWR

BY ALAN COTTRELL



Sir Alan Cottrell, Master of Jesus College, Cambridge, was Chief Scientific Adviser to the Government from 1971 to 1974

OUR PRESENT energy supplies cannot be guaranteed beyond the year 2000. Unless we act now to close the coming energy gap, we may be forced at the end of the century to drop living standards, shut industries, and queue up on world markets to buy energy at sky-rocketing prices. That is why the Government's decision to start building more nuclear reactors is wise and in our best interests.

But 15,000 megawatts of additional nuclear power will not themselves save the day. Equally strong efforts will be needed on getting more coal, extracting additional oil and gas from our offshore deposits, and conserving energy by all consumers. Only by going all out for all of these will we have a chance of avoiding severe economic deprivation and social distress due to energy shortages at the end of the century.

However, these broad strategic intentions are not by themselves sufficient. They have to be implemented through many technical decisions and here the game can still be lost through wrong technical choices, even when the general strategy is excellent. We are in fact now faced with a major technical decision because the Government has proposed that, after two more advanced gas-cooled reactor (AGR) stations confirmed yesterday, the next station to be ordered should be a pressurised water reactor (PWR).

Starting all over again

If the necessary consents and safety clearances are granted, the Government hopes that work could start on the PWR in 1982. One reactor does not, of course, make a programme and it has been said that decisions about the choice of reactors for later orders will be taken in due course. But one simple fact stands out clearly. Since the PWR is a vastly different kind of reactor from the AGR, an entirely new scientific and technical capability will be needed to look after it. This will make the construction and operation of a single PWR a most expensive undertaking.

Common sense thus shows that the Government must intend to build a series of PWRs, i.e. to make a major switch in future from AGR to PWR.

The scale and significance of this proposed change in reactor policy should not be underestimated. We would be turning away from gas-cooled reactors—the type which have been developing continuously from the earliest days of atomic energy—after having put enormous effort into them. That effort has been rewarded with the highly successful Magnox stations and the good performance now being achieved in AGRs such as those at Hinkley Point.

Having built up experienced teams of gas-cooling experts we

would, instead of capitalising on that strength, be starting over again in a new, largely unfamiliar technical direction. And with the commercial fast breeder reactor (FBR) quite properly claiming its place as yet another major project ready for launching, would we have the scientific and engineering manpower to handle four different commercial reactor systems—Magnox, AGR, PWR, FBR—with full technical mastery in all cases?

Uppermost in most people's minds about the PWR, of course, is the question of safety. One is often asked: "Is it safe?" Such a simple question, but it has no meaning. The important questions to answer are: "What effort is needed to ensure the safety of PWRs? Could we provide it? Would it be reasonable to do so?" Such thoughts were in my mind when, in 1974, I wrote to the Financial Times about the security of PWRs against sudden fracture of their steel pressure vessels. Since then several things have happened so that it is now right, as the Government begins its detailed assessment of PWR, to review the position in the light of these developments.

The most striking event, of course, was the accident at the Three Mile Island reactor, in Pennsylvania. This, understandably, caused great public worry even though the accident was a "safe" one in that it exposed no member of the public to serious radiation. People have said that the accident did not arise from inherent features of the PWR, but was brought about by organisational faults and operator errors.

But more fundamental points appear when one asks: suppose it had been an AGR? How would things have gone in that case? That immediately reveals a great difference. When things go wrong in a PWR they do so quickly. At Three Mile Island big changes in reactor pressure, fuel temperature and water level occurred in the first few minutes of the accident, so leaving the operators virtually no time to react and consult before they attempted manually to control the crisis.

Such speed of change under fault conditions is inherent in the PWR system, because it depends for its cooling upon water being held under high pressure as liquid at a temperature far above its ordinary boiling point; and because the heat generation within the reactor is particularly intense. By contrast, the AGR is cooled by a gas—carbon dioxide—which, unlike water, cannot suddenly change its physical state and which depressurises only slowly. Moreover, the temperature in an AGR can also change only slowly, because the heat is generated less intensely and the reactor contains a huge mass of graphite which can absorb heat.

These are inherent differences between AGR and PWR, which need to be carefully appraised when making a choice between

them. Nevertheless, at Three Mile Island, the public was protected by a large number of steel wires. If one wire snaps the vessel remains intact and an early and safe warning has again then been given of the impending state of the vessel. The AGR and later Magnox vessels are of this type.

The security of the PWR vessel depends instead on the avoidance of dangerously large cracks or similar defects in the metal. The first step here is to

the pressure vessel not of steel plate, but of concrete reinforced by a large number of steel wires. If one wire snaps the vessel remains intact and an early and safe warning has again then been given of the impending state of the vessel. The AGR and later Magnox vessels are of this type.

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A 15-YEAR HISTORY

THE advanced gas-cooled reactor was first ordered commercially in 1965, following operation of a 33 MW prototype. Five AGR stations (ten 660 MW reactors) were ordered between 1965-71. Four are operating and the other six are still unfinished, but scheduled to come into operation between 1981-83. No serious interest has been expressed by any export market in the 15 years since the AGR's commercial debut.

The five UK stations are built to three significantly different designs. All are different from the prototype, and all were modified during construction—an important factor in delaying completion. The electricity industry plans to operate them all more conservatively than when ordered, by reducing the gas temperature and hence limiting output to about 600 MW.

A fourth AGR design is close to completion, for two new stations at Heysham and Torness. Its major

difference is a larger size of reactor, intended to restore the rating to 660 MW—the size of the turbo-generators at the latter operating stations. It will also give more access for in-service inspection. Its electricity costs are expected to be 10-15 per cent higher than for a PWR station of comparable size.

A fifth design has been considered, which would remove a major complexity of all four existing designs by eliminating the "hot box" above the reactor, which is difficult to inspect in service. This design would require several years to complete and prove.

Two AGR stations are being built without sight of any industrial contributions at Heysham and Torness. The electricity industry has indicated that it may wish to build more nuclear stations close to population centres, and that its preference in these circumstances would be for the AGR.

In fact, tests of the best standard ultrasonic practice (in that laid down in the ASME XI Code, the engineering standard used universally in the Western world) on thick steel plate have shown that there is a mere half chance of detecting even a

1-inch crack. Only cracks deeper than about 2 inches have a high (say, better than 95 per cent) probability of being detected. Clearly, an improvement in ultrasonic techniques and procedures, to well beyond the best standard practice, is required if all potentially dangerous cracks are to be detected. A minimum goal here ought to be the proven ability in practice to detect 1-inch cracks with a fair (say, 50 per cent) probability, and 1-inch cracks with a very high (better than 95 per cent) probability.

Quarter-inch cracks are well below the dangerous range, provided that the vessel has been made to specification and that it is not highly stressed when cold. Nevertheless, such cracks are still significant. First, there is the possibility that, during the life of the reactor, they may slowly grow deeper, particularly by metal fatigue accentuated by corrosion, and so may eventually become dangerously large.

Also, quarter of an inch is about the greatest depth at which elimination of a surface crack by simply grinding it out could be reasonably entertained. Beyond that depth—as well as in the case of all cracks deep inside the material—re-welding and heat-treating of defective regions after grinding out the crack would have to be envisaged. These will be vastly more difficult, if they have to be done, by remote control on a highly radioactive vessel. This problem has clearly weighed heavily with the French, in their difficult decision to operate some of their PWRs, now that 1-inch cracks have been discovered in them.

In the light of all this, the question: "What effort is needed to ensure the safety of PWRs?" can now be answered, at least as far as pressure vessels are concerned. The following steps are needed, in my opinion:

- All the Marshall recommendations for the manufacture, operation and inspection of PWR vessels should be applied rigorously.
- The ultrasonic techniques and procedures to be used on all PWR inspections should be improved up to a standard well beyond that of the ASME XI Code, and which is able in practice to detect cracks with fair probability and 1-inch cracks with very high probability.
- Methods for repairing cracks remotely in thick steel without impairing the fracture toughness of the material should be developed.
- All cracks deeper than 1 inch should be repaired by these methods.

Could we provide all this? I do not know, but we ought not to settle for less. Would it be reasonable to provide it? Perhaps yes, if we had no alternative. But we have an alternative: the AGR.

An Assessment of the Integrity of PWR Pressure Vessels, UKAEA, 1976.

MEN AND MATTERS

Slow float for tungsten miner

Wall, we were warned. Last week stockbroker Carr Schag held a conference to announce the coming to market of Hemerdon Mining and Smelting at which special mention was of the fact that dealings would probably be very slow to start. No one then knew exactly how slow.

Dealings in Hemerdon, which has the rights to the UK's biggest deposits of tungsten (near Plymouth), were due to start on the Stock Exchange yesterday. Company chairman Carl Schwarzwald was duly ushered into the visitor's gallery by solicitors senior partners from Carr. There the little party waited. And waited until a red-faced emissary from the floor popped in to announce that there could not be any dealings since there was no stock in the market.

Embarrassed exchanges followed between Carr and New York broker Focherty and Focherty which has been making a market in Hemerdon for about three weeks. This, apparently, is not long enough for the U.S. communications network.

Let me come clean and declare a personal interest in the gloomy prospects of Belle Vue, the high spot of the Manchester entertainment world. As a lad I worked there during school holidays earning 3d an hour for pretending to be a mechanic in the Woodland slot machine arcade, and 1s 6d (3d embarrassment money) for cleaning up behind indecent leopards at the Christmas circus.

In those days hundreds of thousands came at weekends from all over the north to dine, dance, visit the menagerie, thrill to the speedway, fritter away pay packets at the funfair and to be scared by the "Bohs, the most terrifying roller coaster this side of the Atlantic."

Now, some 20 years later, most of the popular attractions have closed and owner Trusthouse Forte is hawking this prime site (68 acres three miles from Manchester city centre) around prospective buyers.

Opened as a menagerie in 1836, Belle Vue grew rapidly in its early years and quickly became a magnet for any spare cash circulating in Lancashire's industrial sprawl. "Now," says THF Leisure director Kenneth Paxton, "Belle Vue is a little old hat. Most people have cars and few want to visit the centre of Manchester on their days out."

And since the higgledy-piggledy two-up two-downs of surrounding Ardwick, Gorton and Longsight have been replaced by low-density housing estates, Belle Vue's doorstep clientele has also been dramatically thinned.

The beginning of the end became apparent in 1974 when THF pulled down the shaky old Bohs, the park's most renowned landmark. The main entrance, the zoo, was closed in 1977, and the last of the famous rides, the Scenic Railway, was demolished the following year.

Behind the high walls cooaling pleasures within from travellers along the Manchester to Sheffield road, the attractions have since continued to fade. Only as an exhibition centre does the park shine with anything resembling its former glory.

A co-educational now runs a modest footfall on a seasonal licence, the huge Elizabethan ballroom is about the banqueting business is scheduled to close. The 5,000 capacity King's Hall stands empty for much of the time, and, horrors, the famous Belle Vue Aces speedway team is committed only to completing its fixtures to the end of this season. "Ee, 55 as my favourite Belle Vue parrot used to squawk, "ecky thump!"

Oh, really, responded Wickenden carelessly. We have been rather too busy with the serious business. When we get the licence we shall have to buy the name from them. Or we may simply have to buy Charterhouse.

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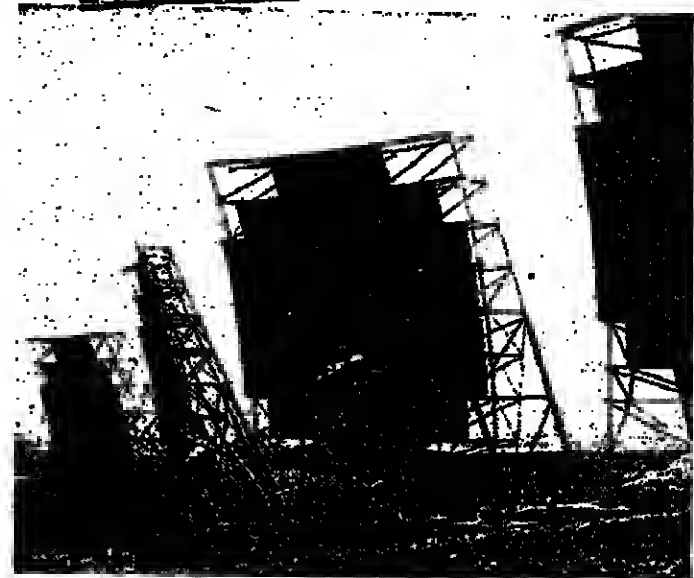
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Tuesday April 15 1980

هكذا من العمل

Communications

Communications has grown to become one of the largest industries in the world, serving many complex needs. The increased sophistication of modern networks and equipment will be on show at the Communications 80 exhibition, which opens in Birmingham today.



Aerials at the new radio station at Fraserburgh, Aberdeenshire, one of two shore stations for the new network of Post Office radio links over the northern North Sea

Change bringing new systems

By Elaine Williams

MUCH HAS BEEN talked about the electronics revolution which will radically alter all our lives. Few people realise that in the world of communications this revolution has been under way for many years and the technology which lies behind all communications systems has changed almost beyond recognition.

For example, the inside of a television set bears little resemblance to those made in the 1950s while today's modern electronic telephone exchange makes its electro-mechanical predecessor look as efficient as a steam engine compared to a diesel locomotive.

Today, it is possible, for almost any two distant points on the Earth to be connected by a communications link, probably using a satellite—a feat which would have been marvelled at only 20 years ago, but today is hardly acknowledged.

Good communications create a demand for more and even faster communications, not only to speed telephoning but for computer and other data and even radio and television. Some countries have stretched their existing networks almost to capacity and are impatient that new and more sophisticated equipment is not being installed fast enough to cope with their growing needs.

Within communications there are several growth areas, ranging from equipment related to the development of the fully electronic or "paperless" office, to the changing technology which lies behind the support of the telecommunications industry as a whole.

Many companies in the computer, telecommunications and office equipment fields have been turning their thoughts towards developing products for the electronic office since it will require the elements of all three industries.

Recently, Matsushita Electric set up a British subsidiary, Panasonic Business Systems, to bring together its activities in office equipment including small business computers and plain paper copier. Previously Matsushita, which is better known for its hi-fi equipment under the Technics, National and Panasonic brand names, had used a distributor.

Glass strands

The new technology involves the growth of satellites; the replacement of conventional copper telephone wires which link each home to an exchange by fine glass strands called

optical fibres; and the increasing use of electronic computerised telephone exchanges to replace old fashioned electro-mechanical ones.

Business communications have been growing at the fastest rate although the world is still a long way from the day when paper is replaced by electronic signals stored in a computer's memory. Demand for documents is as strong as ever and the use of facsimile to reproduce text and graphics is forecast to grow rapidly and will be included in the electronic office of the future.

The link which connects one office in the next and the system which routes the information is already undergoing change. The U.S. and Canada, the biggest telephone users in the world, have largely electronic-controlled exchanges which are extremely reliable and require little maintenance.

Western Europe is to replace its old telephone equipment progressively during the 1980s while the developing nations also want to build up their sometimes primitive communications networks.

Much effort has been made by telecommunications manufacturers over the last decade to produce totally digital electronic exchanges. It has been a race between countries and manufacturers to produce such equipment because of the export potential which successful design brings.

Totally digital electronic exchanges often contain a computer at the heart of the design which means that they can offer both the subscriber and the telephone operating companies extremely attractive facilities.

For example, the exchange can produce detailed bills itemising each call, its duration and the number of units consumed. New numbers can be added at the touch of a button. Similarly numbers can be changed or deleted without having physically to move two wires from one part of the exchange to another.

It is also easier to find out how much traffic is flowing through the system at any time. An old electro-mechanical exchange could not provide such information and this makes it difficult to plan future telecommunications requirements.

Optical fibres are being hailed as one of the most exciting technical breakthroughs to have been made in the last decade or so. These hair-thin strands of glass offer the hope of a cheaper way of providing communications links and at the same time have significant advantages over the traditional copper wires now being used. They are lighter, smaller and less prone to electrical interference.

Most active

At a different level satellite communications is also becoming of increasing interest to provide business communications in all forms: voice, television, data and even facsimile.

IBM, the world's largest computer company, has been most active in this field. With two other partners it set up Satellite Business Systems with which it hopes to operate its own satellite network covering the whole of the U.S.

The idea is that companies would have their own receiving aerials on the roof of their buildings directed to the satellite above. Initially it will be used mainly to carry computer information.

By the end of the 1980s it may be that many of the world's larger companies will discover that they have enough internal communications to justify their own satellite, or at least a substantial part of a shared system. Even organisations without such large requirements will rely more and more on telecommunications.

Another potentially huge growth area could be for video data: computer information systems which connect an ordinary television set to a computer via the telephone network. Britain, France and Canada have developed such systems which have applications both at home and business.

The British system has already been sold to a number of countries including the U.S., West Germany and the Netherlands, which are carrying out trials of the system. But it will be a couple of years before the system's full potential can be evaluated. It will be the business applications which will predominate for the first few years until domestic subscribers really become aware of the system and feel they can justify its use.

The businessman's basic tool is the telephone and telex networks and he needs to be able to reach one or the other at a moment's notice. He also must be able to be contacted by his colleagues when he is away from the office. For this purpose mobile forms of radio, radio bleepers and radio telephone systems are increasing.

Many national telecommunications authorities are beginning to allow more frequencies to be

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Advanced uses by oil industry

THE OFFSHORE oil industry's sophisticated use of communications networks is an important example of the startling growth of telecommunications in even the most inhospitable corners of the world.

Extracting oil and gas from the sea-bed is a complicated process frequently requiring the aid of computers. Each oil and gas platform needs to send information to shore-based terminals where the progress of the day's work is monitored and sometimes controlled.

Highly reliable communications is demanded by the oil companies for this type of data. The platforms also need conventional telephone, telex and facsimile links.

Normal maritime radio systems cannot cope with the quantities of information sent by the oil companies. They operate on radio frequencies which are far too low to carry the amount of data involved.

The North Sea poses a difficult problem since platforms in the middle and northern parts are well out of sight of land. The Fulmar platform, 175 miles offshore, is served by

a tropospheric scatter system which uses microwaves but allows the distance they travel to be stretched from a mere 30 miles to nearly 400.

The principle of tropospheric scatter has been known since the 1930s although it was not until the 1950s that practical systems, mainly for military applications, were developed.

A pioneer in this field has been Marconi Communications. In fact, a Marconi system was first used by British Petroleum to provide a tropospheric scatter system for one of its offshore platforms in 1972.

In January 1976 the British Post Office opened its international service for oil and gas platforms operating between 100 and 200 miles from the British mainland. This allows access not only to the oil company's own shore base but to the inland and international telex network as well.

Now, 15 platforms have joined the network, with others due to be served soon. By 1981 the Post Office will have spent about £10m on the system.

E.W.

DIGITALLY SPEAKING

The application of digital electronics to many forms of communications is perhaps the most significant development in communication since the invention of

mechanised printing.

It has started to bring about systems capable of integrating speech,

data, video and other communications media, and Plessey is breaking new ground in these developments and their application to both public and private networks.

In the telecommunications switching field, Plessey is playing a major role in the joint development of System X —

the new British digital telephone exchange system

which is now being manufactured for introduction into the UK public network.

In transmission and telex, Plessey also leads — with System 4660 telex, an advanced stored program control switching system now in international service, packet switching for data networks, the new TEP 600 digital transmission systems, and single- and multi-channel radio relay systems for remote area linking.

In the business communications field, Plessey PDX — Britain's first private digital exchange — has British Post Office approval and has been extended to

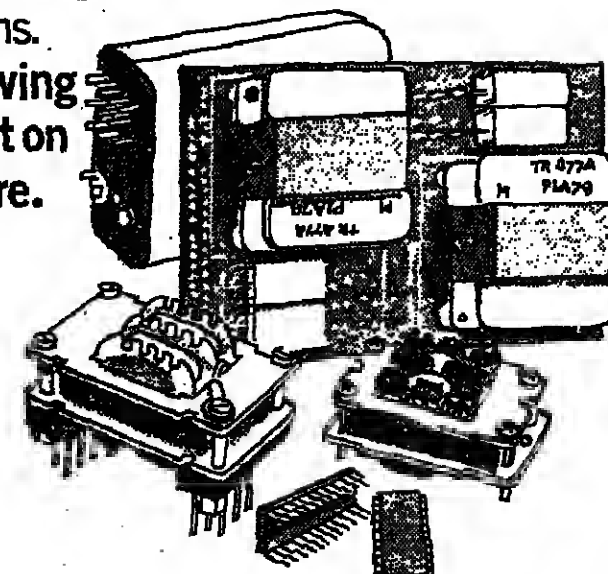
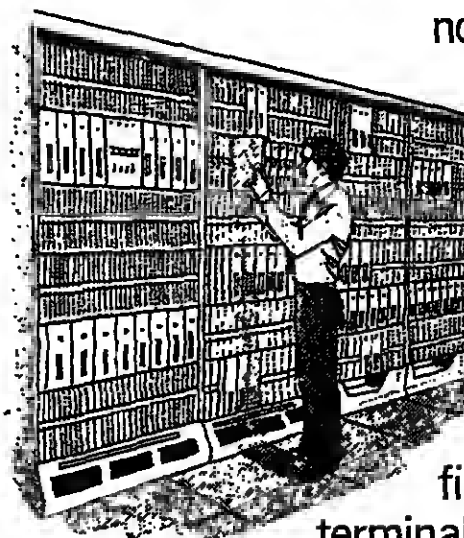
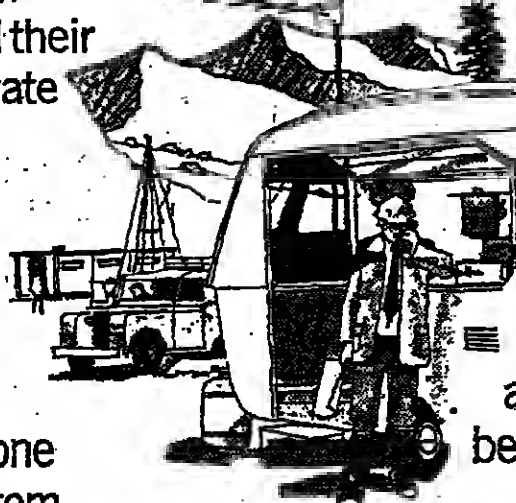
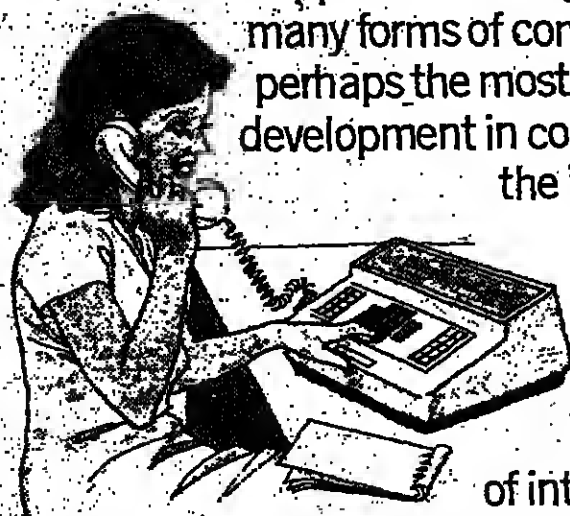
provide up to 300 lines and 2000 extensions. With orders and installations now exceeding £23 million, PDX is already set

to become a key element in future office automation.

In fact, Plessey products and technology — including facsimile transmission, financial transaction

terminals, data capture systems, telegraph test equipment, printed circuit boards, integrated circuits, and a wide range of transformers, coils and other components for digital communication equipment — are all contributing to the development of integrated information handling systems.

Plessey — giving you a head start on the digital future.



PLESSEY GROUP

Telecommunications and Office Systems, Electronic Systems, Solid State and Electronic Components — worldwide.

COMMUNICATIONS II

Use of satellites grows rapidly

IN 1945, the science fiction writer and creator of the film "2001 - A Space Odyssey," Arthur C. Clarke, wrote a letter Wireless World, a magazine for radio amateurs, suggesting that one day it would be possible to launch satellites into orbit around the earth to act as long distance relay stations, picking up signals from one continent, amplifying them and sending them down to another continent.

The idea came more than 12 years before the Russians launched the first artificial satellite, Sputnik 1, and at a time when the only known use for rockets was in the form of Werner von Braun's V2 bombs, which had only recently been dropping on London.

In 1945 the idea of being able to launch a satellite to a distance of 22,300 miles above the earth's surface—where it would take 24 hours to complete one orbit and appear to be stationary over one point on the earth's surface—was science fiction. Today such satellites are common.

Telstar, the most famous of the early communications satellites was launched in 1962. It was built and operated by American Telephone and Telegraph, parent of the Bell Company. But rocket power was not then sufficient to put it in the geostationary orbit and transmitting and receiving stations were only in contact for about 20 minutes at a time. It could carry up to 60 telephone conversations simultaneously and also it could be switched to carry television.

Permanent contract

Then in 1965 Comsat, a specially set up communications satellite corporation, launched Early Bird, which put Europe and North America in permanent television contact. International communications satellites are operated by a world body, the International Telecommunications Satellite Organisation, Intelsat, set up in 1971. Intelsat operates satellites above the Atlantic, Pacific and Indian Oceans linking all continents and most countries of the world.

The Intelsat network carries more than two-thirds of the world's transoceanic traffic. In 1979, the use of its satellites grew by over 25 per cent on the previous year, and even faster growth is predicted. In fact, the network's capacity is planned to be increased from its present 30,000 channels to

100,000 by the mid-1980s and eventually 400,000 by the mid-1990s.

The present generation of satellites Intelsat IV and IVa are now reaching the end of their working lives and are due to be gradually replaced by the Intelsat V models which are to be launched this year. Each new satellite will be capable of carrying nearly 25,000 channels, compared with 12,000 in the previous designs.

The use of Intelsat satellites in individual countries' domestic communications networks has also been growing rapidly over the last few years. Countries were originally allowed to lease some of Intelsat's spare capacity on a temporary basis. At the moment 17 countries lease from Intelsat and several others have expressed an interest in doing so.

This rapid growth in the leasing business, apart from its international role, generated a lot of extra revenue but also poses a problem for Intelsat since it takes up a lot of the organisation's back-up capacity which is needed in case of failure of part of the service. Intelsat says that by 1983 nearly two-thirds of the Atlantic and Indian Ocean back-up will be leased out.

The U.S. and Britain are the largest shareholders in Intelsat and make heavy use of the network and the growth in the number of capacity channels is in line with the need for more international circuits—although it conflicts with the similarly growing need of purely domestic users.

The U.S. has three domestic satellites services. One called Westar is operated by Western Union. It has two satellites which transmit speech and information in the company's national telephone network. The American Satellite Corporation leases some space from Westar and then resells the capacity to other bodies. The Public Broadcast System, the U.S. answer to the BBC, also uses it for its transmissions around the country.

Another system, Satcom, operated by RCA Americom, also has two satellites which handle the voice and data requirements of the U.S. military as well as television companies' needs throughout the country.

The third satellite company is Comstar, owned by Comsat General but leased to AT and T. Its satellites are used for

telephone messages and data. The Federal Communications Commission, which controls and regulates all communications services in the U.S., refused permission to allow these satellite systems to be used for purely private applications, such as leasing by an individual company, until 1979.

However, the growth in interest of private systems for business users has been considerable. Two new satellites have been planned for launch this year by Satellite Business Systems. This company is owned by Comsat General, IBM, and Aetna Life and Casualty.

The system is intended for business communications with each company having a small receiving aerial known as an earth station mounted on the top of its headquarters. This use of satellites is likely to be a very important area in the future.

Cuba has satellite communi-

cations through the Intersputnik system, which allows it to connect with the USSR and certain eastern European countries.

Heavy demand

Canada also has its own domestic system called Anik. Three satellites are now in orbit to meet the heavy demand of Southern Canada, and also providing telephone and television services to the isolated far north.

Mexico has no domestic satellite, but it was an early participant in Intelsat. The Mexicans also expect to be a part of SERLA, a regional satellite system to serve the Spanish speaking countries of Latin America. It should be operational by the mid-1980s.

The U.S. and Canada communicate through both the Atlantic and Pacific Intelsat satellites. Other North

American countries which use the system are Belize, El Salvador, Panama, Nicaragua, Greenland, Jamaica, Haiti, the Dominican Republic, Martinique, Barbados, Trinidad and Tobago, Guatemala and Costa Rica.

In Europe, 17 telecommunications organisations belonging to the European Conference of Postal and Telecommunications have joined forces with the Intersat organisation to coordinate activities for the first European Community satellite. Satellites will be supplied by the European Space Agency and built by MESSE, a consortium of European manufacturers.

At the beginning of 1979, the French Government, which considers the growth of telecommunications to be important to economic growth, decided to start a domestic satellite telecommunications called Telecom—1 to meet the requirement of both Government and private

business. This system will be in operation by 1983.

The use of satellites is governed by regulations formulated by the International Telecommunications Union. One of its major problems is that developing nations presently having no satellite systems of their own might find that by the time they need to have one, there will be no space left in the already overcrowded frequency spectrum for them.

Industrial nations have the technology and occupy most of the bands. The ITU has to ensure that each nation has a fair allocation for the future. Last year, the ITU held a major conference to sort out telecommunications needs into the next century but it is such a complex task that satellite communications is to have its own conference later in the decade.

Elaine Williams



Palapa 2, Indonesia's second domestic communications satellite, is tested by the makers, the Hughes Aircraft Company of California, before its launch from Cape Canaveral in 1977

More data networks for computer users

IT MAY be difficult for the layman to imagine computers talking to each other across great distances. But techniques enabling them to do so are now well established, and demand from computer users for communications facilities has produced a strong and continuing expansion of both public and private data networks over the past 20 years.

Nowadays, computers need not be of the same design, or even made by the same manufacturer, to hold mutually intelligible "conversations." Modern data networks are designed to translate the languages spoken by different machines and make them compatible with other devices such as word processors and facsimile transmission equipment.

A major impetus behind the growth of data networks has been the increasing popularity of so-called distributed data processing. In the early days of computing, many routine business tasks were batch processed. For example, a payroll prepared in one office would be transported to a central mainframe computer and fed into it as part of a batch of similar operations. The results

would then be shipped back to the office which needed them.

Falling hardware costs have made it possible nowadays to distribute computing power much more widely throughout an organisation. Batch processing has given way to on-line operations carried out in "real time," affording large numbers of users direct access to one or more computers via remote terminals. Another approach uses a number of mini-computers tied together in a network.

Clearly, needs differ depending on the speed of communication required and the volume of information to be sent. Many large organisations which generate substantial internal data flows, lease private telephone circuits to which they have exclusive access to carry the information.

Leased circuits by-pass most public telephone exchanges. But leased circuits are still comparatively costly and are not usually an economic proposition for the casual user.

An alternative is switched circuits. These are normal telephone lines which have been set aside for data transmission but which pass through exchanges.

They are not dedicated to specific users and charges are scaled according to the time of day, like ordinary telephone calls. Clearly, they are most economic when used at off-peak hours.

Inexpensive

The third common type of data network is packet switched. Data are made up into one or more packets of a fixed length, each bearing the address of the receiving terminal. A packet is then transmitted to its destination via a series of switching points, each of which forwards it to the next point as soon as a line becomes available. Because an open circuit is not required for the length of the journey packet switching is a relatively inexpensive method of transmitting information over long distances.

Public packet switching networks like GTE Teleport and Tymnet have operated for some years in the U.S., running on lines leased from telephone companies. American Telephone and Telegraph, which holds a virtual monopoly over the U.S. telephone system, also plans to introduce a packet switched data network over

existing digital lines, though it received a setback recently when its initial petition to the Federal Communications Commission was dismissed.

Since then, however, the commission has moved dramatically to open the market by voting to permit any company to offer computerised telecommunications services without having to seek its prior approval.

The decision will almost certainly be tested in the courts. But if allowed to stand, it will both remove the previous barriers to AT and T in the data network field and encourage increased competition from large corporations like IBM and Xerox. Both these companies already have plans well advanced to offer satellite services carrying voice, data and image transmissions.

Though private packet switched systems have existed in Europe for some time for internal communications—in large companies—British Steel and Barclays are among those using them in the UK—public services have only recently started to come into widespread operation.

In Europe, unlike the U.S., these services are operated not by private concerns but by the

national posts and telecommunications authorities (PTTs).

Packet switched public networks are already operating in France and West Germany, where the Bundespost also offers a public circuit-switched network. In Britain, the Post Office plans to introduce its service in July. This will be in addition to the data service launched in 1977 which links UK subscribers to U.S. data-bases through a connection with Tymnet.

Earlier this year, an EEC-sponsored packet switched network named Euronet DIANE was inaugurated. It enables subscribers in all nine Community countries to tap scientific and technical information stored in a number of scattered European data-bases. It had been hoped originally that Euronet would provide the basis for a single EEC packet network, but with national PTTs going their own way, it seems unlikely to develop into one.

Advances in communications technology are expected to lead to many new services being introduced over the next decade. The most important innovation is the progressive digitisation of communications

networks, initially in transmission but eventually including most switching facilities.

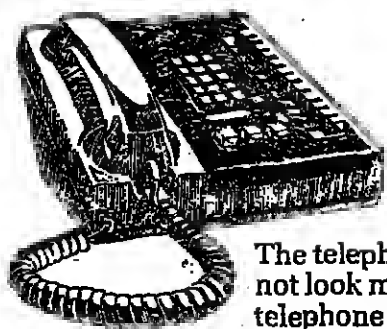
Digitisation, the technique of transmitting signals in the form of binary digits, will not only improve the accuracy and reliability of telephone communications. It also means that voice, data, text and image can all be sent in the same form on the same lines.

This move should offer users a far greater range of communications facilities at economic rates and will be a key to the development of future fully-integrated electronic office systems. In the U.S. at least it also promises to accelerate the erosion of the regulatory distinctions between different types of carriers.

The liberalisation process is happening more slowly in Europe, but it is happening. The Post Office and other national PTTs are facing sharp challenges to their telecommunications monopolies. They will have to open up their networks if they are to prevent private sector competitors from offering rival services, notably in the data communications field, in the years ahead.

Guy de Jonquieres

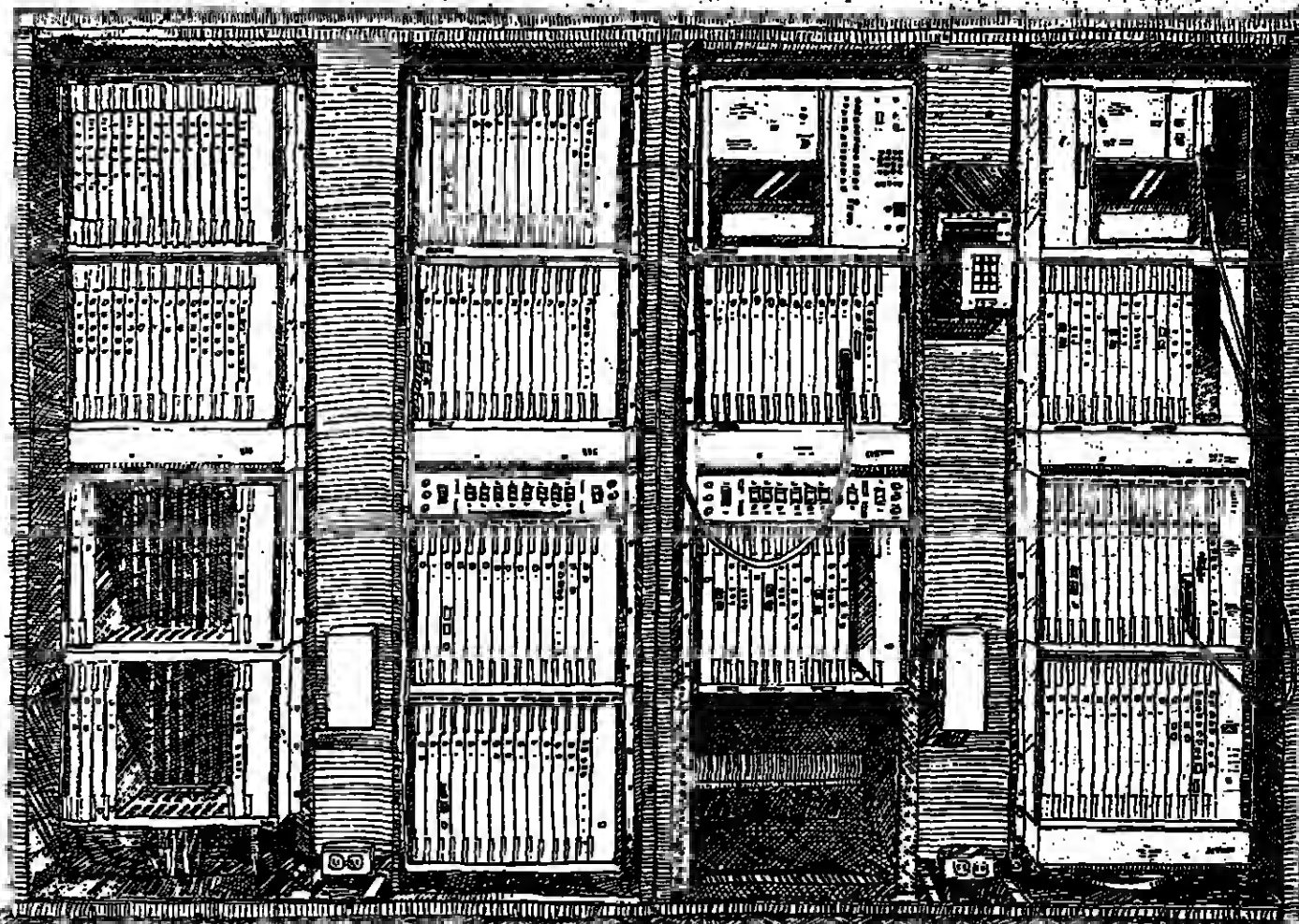
THE TELEPHONE OF THE FUTURE.



The telephone of the future may not look much different than the telephone of today. As it stands, it's a simple tool to operate. It must remain that way. What will change, however, are the capabilities of this seemingly simple tool.

Take the SL-1 office communications system for example. Introduced in 1975, the SL-1 has over one million lines in service in 18 countries. The SL-1 provides features such as call forwarding, conferencing and automatic dialing, all at the push of a button. The latest addition to the SL-1 is the integrated voice and data capability thus bringing added convenience to the data user.

THE FUTURE OF THE TELEPHONE.



The future of the telephone rests on the communications network that supports it and this network must meet the changing needs of its users.

Telephone administrations and private users alike are introducing digital transmission and switching facilities. They will be the backbone for tomorrow's services of electronic mail, messaging—graphics—teleconferencing.

The future is based on digital technology. Its compact, modular componentry and flexible software control permits the convenient addition of new features. As the user requirements change, the communications network

adapts to meet those needs.

The SL-1 and the SL-10 are examples of this flexible digital technology. Evolved from the SL-1, the SL-10, introduced in 1977, is designed as a switching and administrative node in a distributed data network. It creates a common network to transmit packets of information amongst network users of data terminals or computers and establishes links with other SL-10 networks or private or public networks.

The SL-1 and SL-10 are fully supported with complete documentation and Northern Telecom provides the installation, training and maintenance required to

support these systems from its European offices. The SL-1 and SL-10—essential for the communications networks of the future.

Northern Telecom Limited is the largest manufacturer of telecommunications equipment in Canada and the second largest in North America. It is also a significant manufacturer of multifunction data terminal systems and other computer-related equipment. Sales in 1979 were \$1.9 billion. It employs more than 34,000 throughout the world and has 55 manufacturing plants in Canada, the U.S., England, Republic of Ireland, Turkey, Malaysia and Brazil.

AXE: the best digital switching investment for telephone administrations?

Here are 23 considered opinions.

Argentina

One digital exchange, serving 7000 subscribers, ordered July 1979. Cut-over 1981.

Australia

A system choice for the modernization and extension of the Australian telephone network. Contract awarded September 1977.

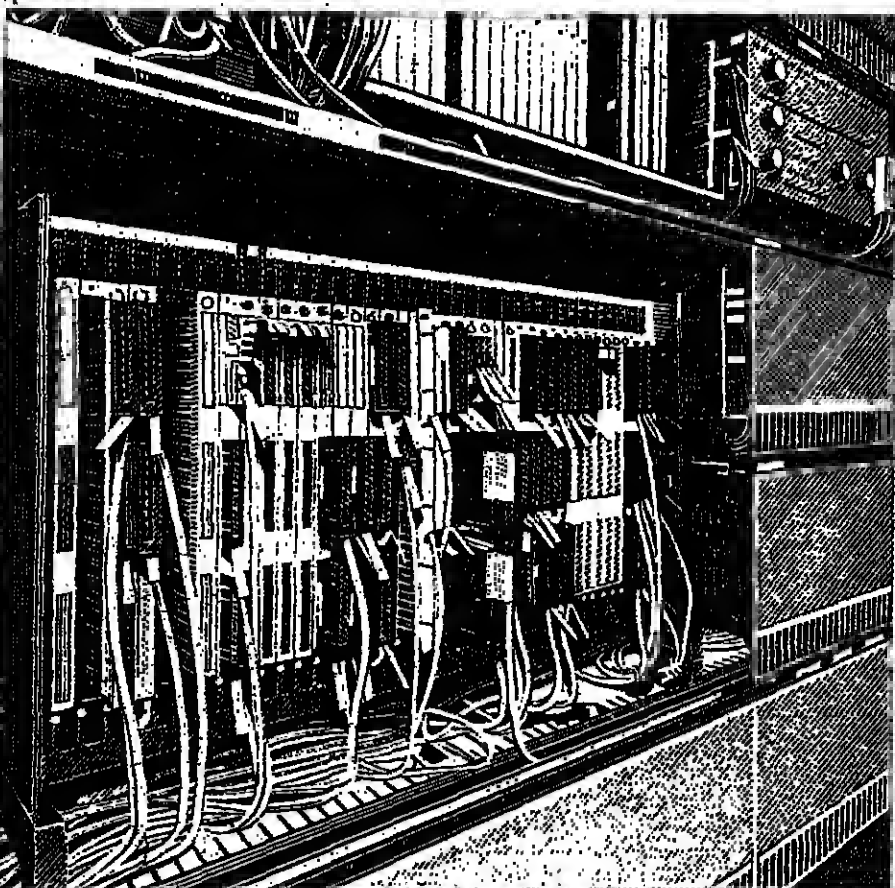
A first analogue exchange with a capacity of 4000 lines is on order. Future deliveries to be produced locally. About 1.5 million lines will be installed during the 80's.

Bahrain

AXE first ordered February 1979. On order: a combined exchange for 10,000 subscribers and 6000 trunks. Cut-over 1981.

Brazil

Tender issued by Telebras, in 1976, for an analogue switching system. AXE was one of three systems chosen for the development of the Brazilian telephone network. Five analogue local exchanges serving 50,800 subscribers are on order. Local production.



A special computer (the APZ 210) and a new high-level programming language were designed to meet the requirements of the AXE software package. As a result of this unorthodox approach, AXE software meets the need of telephony staff, rather than computer specialists.

Colombia

Following keen competition in international tenders, AXE digital exchanges serving 230,000 subscribers and 12,328 trunks have been ordered.

Denmark

First ordered AXE October 1977. Orders to date: three digital transit exchanges for 26,000 trunks; one exchange for 10,000 mobile subscribers; two local exchanges for 6000 subscribers. First exchange cut-over 1980.

Finland

First AXE ordered March 1975. In service: one local analogue exchange for 4000 subscribers (cut over 1977) and one digital transit for 480 trunks (cut over 1978). The following digital exchanges are on order: one exchange for 10,000 mobile subscribers; 19,000 local lines; and 1440 trunks for extensions.

France

In May 1976, after an international tender for analogue exchanges, the French PTT selected AXE as one of two systems. The first exchange, with an initial capacity of 12,900 lines, was handed over in June 1979. Local exchanges for 660,000 subscribers are on order. Local production.

Ireland

The digital AXE system has been chosen by the Department of Posts and Telegraphs, for an extensive expansion and modernisation of the telephone network of the Republic of Ireland.

Italy

First AXE, with a capacity of 960 lines, handed over in December 1978. In addition, two transit exchanges with a multiple capacity of 4800 inlets are now in service. On order: a further 7680 trunks - two exchanges with capacity of 6240 trunks and 1440 trunks for extensions.

Kuwait

Three digital exchanges for 30,000 subscribers, ordered in June 1977 after an international tender. Another tender resulted in an order for an additional 40,000 subscribers.

Recently, extensions for 40,000 subscribers have been ordered, bringing the total to 110,000 subscribers.

Madagascar

One local exchange, serving 20,000 subscribers, ordered in 1978.

Malaysia

Three AXE local exchanges, serving 40,000 subscribers, are on order.

Mexico

Contract signed March 1979. On order: digital AXE equipment for 25,000 subscribers. Cut-over 1980.

Netherlands

International tender concerning a system choice. Late 1977 PTT announced their choice of AXE.

To date, orders placed for 16 local exchanges with a capacity of 42,496 subscribers. Original decision for analogue equipment has recently been changed to digital. First exchange will be cut over in 1980. Three districts in the Netherlands - Rotterdam, Breda and Goes - will be served by AXE.



Overall long-term economy was the main objective for the designers of AXE. The language designed by Ericsson for man-machine communication is a good example. It has proved so effective that it is now accepted as an international standard.

Norway

First order September 1978: two digital exchanges for mobile subscribers with a total capacity of 25,000 lines. The Oslo exchange starts operation in 1981, the Bergen exchange in 1982.

Panama

First AXE ordered February 1978. On order: three digital local exchanges with a total capacity of 10,000 lines. First exchange cut-over 1980.

Saudi Arabia

The tender, issued in 1977, was the largest single contract in telecommunications history: an SPC system choice for the extension of the Saudi Arabian network. On the 25th January 1978 a consortium of L M Ericsson, Philips and Bell Canada was awarded the contract.

In addition to up-grading existing Crossbar exchanges, L M Ericsson will deliver 24 AXE digital exchanges for 183,000 subscribers and 66,720 trunks. To date, seven transit exchanges for 42,240 trunks and six local exchanges for 90,000 lines are in service. On order: 93,000 subscriber lines and 24,480 trunks.

Spain

First AXE ordered December 1977. Three digital local exchanges for 30,000 subscribers are on order. First exchange to be handed over in 1980.

Sweden

First exchange cut-over March 1977. On order: twelve digital local exchanges for 242,000 subscribers and two digital exchanges for 20,000 mobile subscribers.

United Arab Emirates

Fully-digital AXE exchanges serving over 40,000 subscribers were ordered in January 1980.

Venezuela

One local AXE exchange serving 5000 subscribers handed over December 1979.

Yugoslavia

First AXE ordered January 1979. On order: twelve local exchanges for 76,000 subscribers and two transit exchanges with a multiple capacity of 5135 inlets. Local production.



AXE was designed from the beginning to be completely modular in both hardware and software. This means that functions can be added, deleted or modified with minimum impact on other functions.

Today, the world's telephone administrations are faced with the need to make a rapid transition from analogue to digital telephony. The key investment decision is the choice of telephone exchange system, since the exchange, once installed, has an economic life of many years. The exchange contains the intelligence of the network, and defines the possibilities for flexible long-term development.

The Ericsson AXE digital switching system is considered exceptional in its ability to provide low long-term operating costs and outstanding versatility. By March 1980, just 37 months after its introduction, it had been chosen by administrations in 23 countries.

Success like this is vital to any digital switching system. It means that AXE will be continuously enriched and developed, making it even more attractive to telephone administrations all over the world.

These facts contribute to making AXE a sound long-term investment.

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هكذا من العمل

COMMUNICATIONS IV

Electronics changing office routines



Integration of the new electronic equipment provides enormous potential for automating many office tasks

THE ERA of the fully-integrated electronic business communications system is almost upon us. If that sounds a bit of a mouthful, the transformation of established patterns of office routine which its implementation is likely to bring about is also fairly modest.

Cognoscenti like to talk of the office of the future, in which almost all information now committed to paper can be handled electronically. But rather than seek to define to precisely their vision (which in any case takes a variety of forms), it is probably easier and more practical to describe the main forces at work which inspire it.

First, convergence of technologies. Most of the world's telephone networks still operate on analogue systems. Speech is transmitted along telephone lines as frequencies, exactly corresponding to the sound waves generated by spoken words. Calls are switched through exchanges by strower or cross-bar mechanisms, which employ moving parts to make a connection.

The new generation of telephone equipment now being installed is fully electronic and uses digital technology. Speech is converted first into electric current and then into a stream of binary digits which are transmitted down the line at high speed. At the receiving end, this "bit stream" is turned back into electric current and then into sound waves.

Convenient

All this will not only make telephone communications more accurate, reliable and, it is hoped, cheaper. It is also extremely convenient because nowadays all types of communications, including text, data and image, can be treated in exactly the same form. Moreover, because speech requires a large number of digits per second, a huge volume of data can be transmitted on a single telephone line.

It is therefore technically possible to link all the equipment in a modern office together in an integrated network designed to handle both internal and external communications. In addition to computers, from which the latest telephone technology was borrowed, the latest private automatic branch exchanges (PABX), facsimile machines, copiers and word-processors are all designed to operate on digital principles and to communicate with each other.

The second important driving force is the immense potential for applying automation to the office. Compared even to the most archaic factory production line, it has lagged well behind in the use of technology to raise productivity. Experts in office systems insist that valuable manpower and time is devoted to tasks which could be done more quickly, simply and efficiently by a machine.

They believe that in time, even the most recalcitrant managers will be driven to accept a greater degree of office automation by steadily rising staff costs and other overheads. The rapidly increasing number of companies which are now gearing up to supply this new market admit, however, that there is a tough selling job still to be done. Usually, this is referred to as a process of educating businessmen and officials about the potential advantages which today's technology can offer.

A starting point for many customers will be a PABX. The latest models are fully electronic and offer a range of useful features. These include facilities for re-routing calls automatically from one extension to another, repeat-dialling of engaged numbers, storage of frequently called numbers and inter-connection with paging systems.

PABXs come in all shapes and sizes. The biggest, currently offered, by Philips, can accept up to 8,000 lines, though it is not fully electronic, using reed relays rather than circuits to perform switching. At the other end of the scale, the Post Office recently unveiled an electronic exchange for up to five lines.

An interesting variant on the PABX has been developed by Delphi, a subsidiary of Exxon, and is being marketed in Europe by Nexos, an offshoot of the National Enterprise Board. It is an immensely powerful computer, capable of handling up to 250m separate digital hits of information per second.

The modern-minded office manager will probably want to look next at facilities for handling text. In this area, there is a convergence occurring, with copiers, facsimile machines and word-processors all becoming more sophisticated and versatile. Ultimately they may all even merge into the same kind of machine.

An important aspect of their development will be their ability to communicate with each other, as well as with other types of machine. "Intelligent" copiers are now available which, by decoding digital information contained in electronic memories, can reproduce it in printed form—even if it was never before on paper.

Facsimile machines, some of which now use xerographic techniques to reproduce text and graphics, may in the future also double as copiers. They can be fitted with memories, in which information may be stored before transmission or after it has been received at its destination, and research is being conducted on ways of linking them with word-processor memories.

copies at their destination. A recent study by Macintosh Consultants, who analyse the electronics industry, foresees a dramatic growth of electronic mail over the next few years. It forecasts that the number of items sent in this form will rise to almost 19m per day in 1987 from 600,000 in 1978 in Western Europe.

It cautions, however, that the growth of electronic mail will depend on the speed at which national telecommunications authorities make available the necessary communications facilities, and on what conditions. While public packet switched networks, for which rates are often independent of distance, are spreading throughout Europe, national authorities remain at present strongly opposed to allowing private "value added" networks to operate. They fear that such operations would cream off the most profit-

able business while contributing nothing to the cost of maintaining national telephone systems. In the U.S., where telecommunications networks are less rigidly regulated, there has been a strong growth in the business of "value added" networks in recent years. At the same time the competition has kept tariffs low by European standards. Macintosh believe that the volume of electronic mail will reach 26.2m items per day by 1987 in the U.S. and Canada, up from 2.8m in 1978.

Leased line telephone networks are also widespread in the U.S., offering the cost advantages of a tie line but with far greater flexibility. An Exxon subsidiary now offers a service which enables a subscriber to dial into the system from a telephone not normally hooked into the network. He is connected to a computer fitted with a voice recognition device. If his voice matches one of those recorded in the computer's memory, the call is automatically routed through the network.

U.S. companies are also well-advanced, with plans to offer highly sophisticated private networks capable of carrying voice, text and data. Both Xerox and Satellite Business Systems—a subsidiary of IBM, Comsat and Aetna Casualty—plan to start operating such services from next year, using satellites to bounce transmissions between ground stations. One facility offered will be teleconferencing, a technology enabling participants in different locations to hold a conversation while watching each other on television screens.

Guy de Jonquieres



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Radio bands a thorny issue

LATE IN 1979 a conference was held in Geneva to discuss how the world should share one of its most limited resources — radio frequencies. Many bands of the radio spectrum are already overcrowded, being shared by many different services from telecommunications authorities to broadcast radio, amateur radio, maritime and military applications.

Last year, more than 150 nations belonging to the International Telecommunication Union, a technical arm of the United Nations, met to discuss many of the thorny technical and political questions relating to the provision, allocation and regulation of radio frequencies.

The World Administrative Radio Conference lasted for over 11 weeks and even then, many of the issues could only briefly be covered and are themselves to be the subject of individual conferences scheduled to take place later in the decade.

The growth of communications and industrial progress are very closely allied. The industrialised nations in Europe and North America control 50 per cent of the radio frequency spectrum while they have only 10 per cent of the population.

The more industrialised a country is, the more telecommunications capacity it has and the more it needs.

This is highlighted by the fact that worldwide there are about 400m telephones. However, in Central and Latin America, Africa and Asia combined there are only 30m telephones which means that 29 per cent of the world's population has 75 per cent of all telephones.

The radio frequency spectrum is split into a number of bands beginning at low frequencies rarely used for communications to the extra-high frequency bands where technical developments are only now beginning to be able to exploit them commercially.

The lowest possible frequency which can be used today in radio is 10kHz (10,000 cycles a second) while the upper limit is about 300 GHz. This range is divided into eight bands and within each band are further subdivisions which are used to allocate the frequencies for particular uses.

Radio communications developments have concentrated on increasing the frequencies which can be used, because the higher the frequency the more information can be transmitted.

The introduction of new types of services and the growing amount of traffic on the airwaves demand more frequency space, or bandwidth, as it is called. For example, within a chosen band it would need only a few hundred cycles (Hertz) to transmit a text message, speech needs a few thousand, while a colour television channel generally occupies as much space as one or two thousand telephone circuits.

A television channel requires a bandwidth of 8 MHz. This same space could carry about 40 FM radio channels, 1,000 AM radio channels and 1,500 telephone circuits.

The International Telecommunication Union has the job of allocating frequencies to particular services. These frequencies are allotted to areas or countries and then individual governments can assign them to particular stations.

Within these higher bands, mobile radio is one of the growth areas, reflecting the demand for a communication service which is personal, two-way, flexible and cheap. Within the services is a wide range from citizen's band, radio bleachers for businessmen and doctors, two way radios for taxis, the police, delivery vehicles, temporary radio networks for use in disasters and car telephones.

This type of service tends to be characterised by the fact that manufacturers, users and retailers are aggressive and individualistic and try to obtain the greatest amount of freedom from Government to market and use the equipment.

Growth of mobile services is rapid. Japan alone has more than 700,000 subscribers to radio paging systems, and the average growth rate in OECD countries is 10 per cent a year.

For radio purposes the world is split into three regions: Region I covers Europe, USSR and Africa; Region II covers the Americas; and Region III covers Asia and Australasia and is related to the distances that radio waves can travel.

The high frequency or HF band is one of the most overcrowded in the frequency spectrum and is allocated to a very large number of services which include the broadcast and so called fixed services (telecommunications links), maritime, aeronautical and land mobile services, amateur radio, radio astronomy and some space research and satellite identification services. Around 50 per cent of the bands are used by fixed services, 25 per cent by mobile services and 10 per cent for broadcasting.

The HF band, which lies in the range 3 MHz to 30 MHz, is popular since the equipment which uses it is relatively cheap. The HF band is capable of travelling thousands of miles which is a major advantage if you are Radio Moscow, Radio Peking, the BBC External Service, Voice of America or Deutsche Welle and want as wide an audience as possible outside the confines of country boundaries.

The major use of this band is on increasing the frequencies which can be used, because the higher the frequency the more information can be transmitted.

The introduction of new types of services and the growing amount of traffic on the airwaves demand more frequency space, or bandwidth, as it is called. For example, within a chosen band it would need only a few hundred cycles (Hertz) to transmit a text message, speech needs a few thousand, while a colour television channel generally occupies as much space as one or two thousand telephone circuits.

A television channel requires a bandwidth of 8 MHz. This same space could carry about 40 FM radio channels, 1,000 AM radio channels and 1,500 telephone circuits.

The International Telecommunication Union has the job of allocating frequencies to particular services. These frequencies are allotted to areas or countries and then individual governments can assign them to particular stations.

Within these higher bands, mobile radio is one of the growth areas, reflecting the demand for a communication service which is personal, two-way, flexible and cheap. Within the services is a wide range from citizen's band, radio bleachers for businessmen and doctors, two way radios for taxis, the police, delivery vehicles, temporary radio networks for use in disasters and car telephones.

This type of service tends to be characterised by the fact that manufacturers, users and retailers are aggressive and individualistic and try to obtain the greatest amount of freedom from Government to market and use the equipment.

Growth of mobile services is rapid. Japan alone has more than 700,000 subscribers to radio paging systems, and the average growth rate in OECD countries is 10 per cent a year.

In Europe, Japan and North America the general trend has been to use more of the UHF bands for mobile radio at the expense of some of the broadcast services. Broadcasters say their needs in the UHF band are growing just as fast as those of mobile radio.

An example of the battle between these two services is highlighted by the fact that the U.S. Federal Communications Commission has already assigned UHF frequencies to mobile radio which were once used by the broadcasters.

In the UK, mobile radio has secured more space to cater for its expanding network, although those wishing for a separate citizen's band facility as in the U.S. are still waiting for a Home Office decision which has been a long time under consideration. Britain is just one of several European countries which have discouraged the use of citizen's band.

Satellites are also important users of the radio spectrum although they are right up at the top end of the bands, operating in the frequency ranges where the wavelength of

the radio beams are in the centimetre and millimetre range. Again these bands are already shared by many users and developing countries would like to have certain frequencies allocated to them even though they are not able at present to use them.

One of the major jobs of the ITU is to try to ensure that the present imbalance in the sharing of the airwaves is rectified without causing major upheavals in the telecommunications field. It is an unenviable task.

Elaine Williams

Improved telephone systems are providing advanced facilities for subscribers. Here a supervisor uses a VDU unit connected to a telephone network.

Elaine Williams

Big investment in world markets

MOST INDUSTRIALISED nations in the Western world have established complex communications networks, many of which have been in existence for nearly 100 years and were originally based on totally mechanical and electro-mechanical designs.

In the U.S. and Western Europe there have been major programmes to replace old equipment with sophisticated electronic systems which can cope with the increasing demand for more telephone lines and better facilities for subscribers.

The U.S. market is the largest and most sophisticated in the world and strong home demand has made telecommunications manufacturers there among the world leaders. The U.S. has the highest number of telephones per head in the world — about 78 per 100 population.

Arthur D. Little, the U.S. consultants, estimate that by 1987 the country's telecommunications market will be worth \$26bn compared with a value of about \$14bn three years ago. Some forecasters believe that the U.S. will continue to be the largest market but others consider that by the late 1980s Europe may surpass it.

In Europe the picture of the telecommunications industry has been one of rapid modernisation over the past five years or so. Growth in the networks has been large as telecommuni-

cations authorities replace their old primitive exchanges — which have been cursed by subscribers for their wrong connections, slow speed, unreliability and lack of facilities — with electronic versions.

Britain has been one of the last Western European countries to develop its own fully electronic exchange network called System X. This was due mainly to a false start in the 1960s.

The UK Post Office with its three main contractors, Plessey, the General Electric Company and Standard Telephones and Cables have been responsible for the development of System X, which is seen as the opportunity for the British industry to remain in the telecommunications race. But to do this substantial exports of System X have to be achieved and this is being pursued by the marketing organisations set up for the purpose.

Vigorous

France has launched into a vigorous and massive modernisation programme to increase the number of telephones from 34 per 100 head of population to 45 per 100 over the next five years. Britain by comparison has 44 telephones per 100. West Germany also has a definite five-year programme, costing about DM 25bn, to provide support for its manu-

facturers, mainly Siemens, which will also increase telephone usage. Italy, on the other hand, has a less clear pattern of growth since most of its telecommunications manufacturers are foreign-owned subsidiaries.

Unlike the well-established networks of the Western world, the Middle East is a relatively untapped market with many European and U.S. manufacturers competing fiercely for the privilege of winning contracts to install complete systems in individual countries.

The development of telecommunications in the Middle East has been due to several factors such as growing economic wealth, pan-Arabism, political independence and the desire to be self-reliant. Countries in the area have very diverse needs because of their population spread. For example, Saudi Arabia has a population equal to New York's yet is nearly the size of Western Europe, while Bahrain's population of 250,000 is crammed into an area of less than 250 square miles.

According to the market analysts Frost and Sullivan, in 1976 the three main areas of the Arab world, the North African States, Gulf States and Central Arabia states had 1.2, 7.8 and 1.8 telephones per 100 head of population respectively, but the analysts estimate that by 1985, these figures will

more than double, reflecting the desire for better communications.

The U.S. and European telecommunications manufacturers have been very anxious to try to win a stronghold in the Middle East since forecasts say that the demand for telecommunications services will result in a five-fold increase over the next ten years, with an average annual increase of 15 to 20 per cent.

Successful

Frost and Sullivan say that the U.S. companies have made the greatest penetration so far, taking about 30 per cent of total business. France and Sweden follow with roughly 16 and 15 per cent each although market penetrations do vary substantially between the various market areas.

Some of the more successful companies include LM Ericsson of Sweden, which in 1978 won about \$1.9bn worth of orders in the Middle East, General Telephone and Electronics, and Continental, both of the U.S., Philips of the Netherlands, and Bell Canada. Other important manufacturers include A.T. and T. and Western Electric of the U.S., NEC of Japan, and Standard Electric of Italy.

The Black African States, with the exception of Nigeria, are also ripe for growth since

the number of telephones per head of population is about 0.6 per 100 and even with an average growth rate of about 8 per cent per annum that figure will barely reach 1 per 100 head of population by 1990.

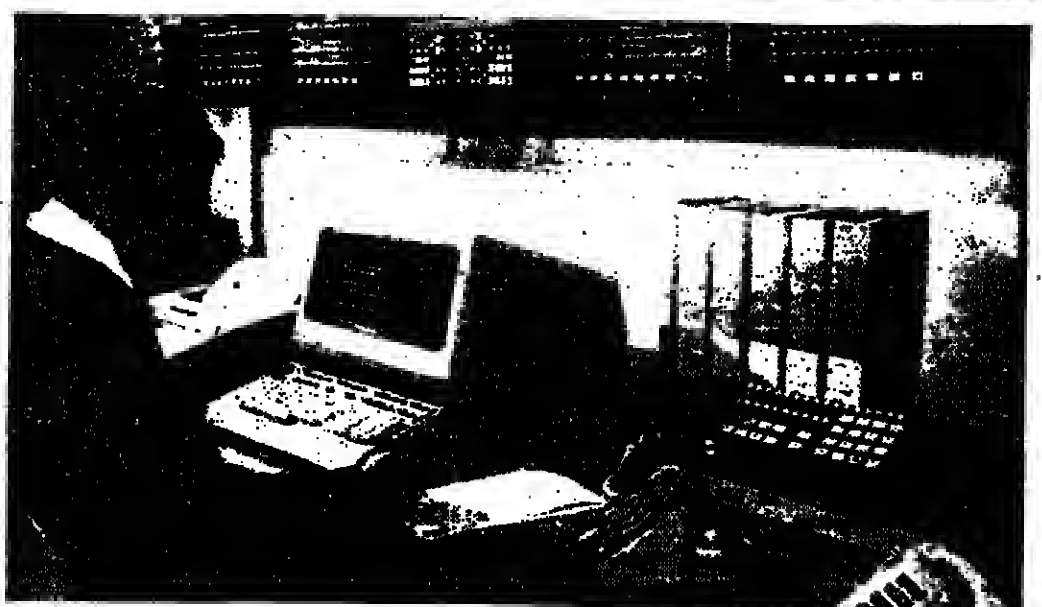
But with the exception of Nigeria, most countries are poor with the majority relying on foreign aid, both economic and technical, and cannot afford expensive telephone contracts to update their equipment.

Frost and Sullivan forecast that Black Africa as a whole will prove to be a steadily declining market in constant price terms until 1985 when there will be an upturn. It says that from a current level of about \$1.66bn the average annual decline will be just under 8 per cent.

Overall long-term trends here are influenced by Nigeria which accounts for \$8.45bn (65 per cent) of the total forecasts because of expenditure on its massive development programme.

The most successful companies selling into this market come from Britain, followed by the U.S., France, West Germany and Japan. Based on 1978 figures the British GEC and its associated companies came top of the league followed by Siemens, Thomson CSF and CGE (CIT-Alcatel).

Elaine Williams

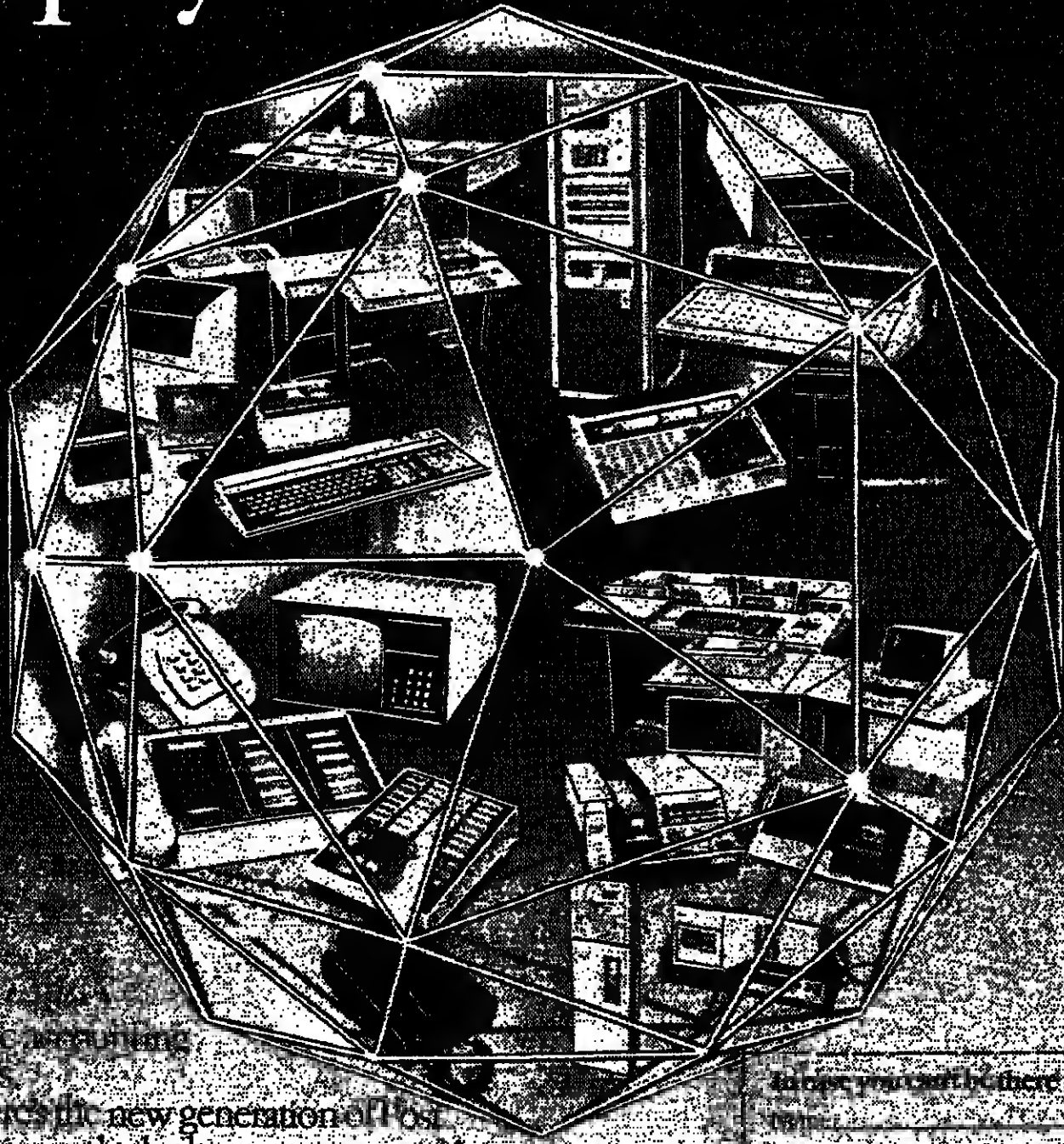


Improved telephone systems are providing advanced facilities for subscribers. Here a supervisor uses a VDU unit connected to a telephone network.

Elaine Williams

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COMMUNICATIONS VI

Military demands becoming more complex

OVER THE past few years the pace of development of military communications technology has been accelerated to meet the rapidly escalating needs of battlefield and other commanders to cope with the increasing complexity and speed of modern warfare. At the same time the diversity, range and greater destructive power of modern weapons has made improved communications essential both on and off the battlefield.

In the UK substantial sums have been spent, and are likely to continue to be, on major new systems to provide the answers to these needs. The annual spending on radio, radar, military communications and other electronics requirements for the armed forces is running at well over £500m a year.

Greater use is now being made of satellite communications systems, and of Automated Data Processing. These are

designed to provide military commanders at all levels with immediate tactical and strategic information, to enable them to deploy their forces to the best advantage. At the same time considerable effort is being spent on ensuring that the equipment used is protected from enemy counter-measures.

This whole area of Electronic Counter-Measures (ECM) is wrapped in secrecy but there is little doubt that it accounts for a substantial part of the effort now being put into military communications, and takes a substantial slice of the communications defence budget. Annual Defence White Papers cloak the limited statements made on this topic with jargon, but the fact remains that an essential element of every military communications system is to ensure that it is not jammed in any way by the enemy. Thus the technology has spawned a curious profusion of initials and

names — Electronic Warfare (EW), Electronic Warfare Support Measures (EWSM), Electronic Counter-Measures (ECM) and Electronic Counter-Counter-Measures (ECCM).

Substantial sums are being spent on them, with various systems being fitted into Jaguar, Tornado and Harrier combat aircraft, Nimrod maritime reconnaissance aircraft, and Lynx helicopters, to name just a few aircraft involved.

Mobile

A new radar jammer and other systems are due to be fitted to some frigates this year, while the recent Defence White Paper also revealed that the UK is closely working with other NATO countries in these fields.

Where it is possible to discuss military communications systems only, it is clear that one of the major developments now under

way is the Ptarmigan, currently under development by Plessey Group (as prime contractor), which is expected to cost eventually well over £100m when it is fully operational with the British Army of the Rhine and the RAF in the mid-1980s. This is a tactical trunk communications system, designed to provide the soldiers in the field with a mobile, highly flexible, all-digital, communications system that will put them into instantaneous contact with all other parts of the battlefield.

With Ptarmigan, soldiers in the front line will be able to communicate swiftly by radio telephone with all other parts of the battlefield and the rear of the line—a big advance

on previous battlefield communications techniques.

Complementing Ptarmigan in the field, but going beyond it in many respects, is another Plessey development (under the aegis of the Ministry of Defence's Procurement Executive) called Wavell. This is a mobile Automatic Data Processing system for Command and Control purposes that will not only provide commanders in the field with up-to-date information on visual display units on the state of their own forces, but also the latest available information on enemy dispositions. This will enable the commanders to make swifter analyses of the enemy's likely positions.

Beyond these developments, work has begun on the "project definition" stage of a new Battlefield Artillery Target Engagement System (BATES), which is intended to help the Army make the best use of its artillery in the 1980s, both in improving methods of acquiring targets and of spreading information about targets to other artillery units.

Various other new military communications and Command and Control systems are now under development. Satellite communications terminals are now in service with the Royal Navy's biggest ships, and these facilities are to be improved. Additional shipboard terminals

are to be ordered, so that by the mid-1980s all the Royal Navy's ships of frigate size and upwards will have a satellite communications system, linking them not only with each other, but also with the Naval Headquarters and the Ministry of Defence.

Also for the Royal Navy, a new centralised Command, Control and Information System is being installed at the Fleet Headquarters at Northwood, Middlesex, while better computer-aided Command and Weapons Control systems are being developed for ships of frigate size and upwards.

For the RAF, a modern, computer-controlled telecommunications system is being

developed, and existing ground-to-air and air-to-air communications systems are being modernised and made resistant to enemy electronic counter-measures, such as jamming. A new Command and Control system is to be introduced for RAF Strike Command, which will enable it to respond much more swiftly to enemy activities and link it more closely to NATO Command Centres in Western Europe. Finally, according to the recent Defence White Paper, there is an urgent need for a new NATO-wide "Identification Friend or Foe" (IFF) system for aircraft.

Michael Donne

Optical fibres offer big advantages

ONE DAY, every telephone will be connected to its local exchange, not by electricity running down expensive copper wires as it is today, but by pulses of light carried by hair thin strands of glass called optical fibres.

Since the early 1970s, companies such as Bell Laboratories and Corning Glass in the U.S., Nippon Electric in Japan, Standard Telephones and Cables, the General Electric Company and Pilkington in Britain have been working towards optical fibre production to replace the traditional cables.

Optical fibres consist of strands of glass with the diameter of a human hair. Each strand is made up of two types of glass whose characteristics are such that when a narrow beam of light is shone down one end, it does not escape through the sides of the glass but appears at the other end. The light beam is bounced down the inside of the strand, being internally reflected many times to stop its leaving the confines of the glass wall.

In practical designs, bundles of such fibres are used to make up a cable and because of the fragility of the thin glass a steel rod is usually built into the cable as protection. Even with the addition of the steel rod the optical fibre cable is many times smaller than a conventional copper one but it can carry an enormous number of telephone calls, and other types of communications such as telex, television, or computer information.

Its other main advantages are that the use of light makes it immune from electrical interference, and light signals can travel greater distances before amplification than can conventional ones.

Eventually, optical fibres will also be cheaper than their copper counterparts and will be ideal for use with the totally digital, computerised electronic telecommunications which are currently being developed by all

the world's major telecommunications companies.

The optical fibre market is not forecast to grow substantially until well into the 1980s. Forecasts say that the low demand of about \$11m for optic fibres will grow to about \$60m by about 1987 and then increase to nearly \$180m in the 1990s. About 70 per cent of demand will come from telecommunications through the provision of services such as cable television, automatic meter-reading, visual telephones and the like.

In both Canada and Japan, experimental wired home services are being installed and represent some of the most advanced thinking in the field. About 200 homes have been included in the experiment in Osaka, Japan and a similar number in the small community of Elie, Manitoba.

Apart from the Post Office in the UK which has many experimental systems installed and plans several more, many other organisations have optic fibre telecommunications routes installed. Thomson-CSF is one of the leading companies in France while Pirelli is the main company in Italy. In West Germany, Siemens joined forces with the U.S. glass manufacturers, Corning Glass to form a joint venture, company, Silecor. Philips in the Netherlands also has experimental routes in the country.

Poor reception

Optical fibres open up opportunities to take a full range of services to rural areas with poor telecommunications. These communities may be out of the range of television stations, have poor radio reception and telephone subscribers may share a line with three or even four others.

In the U.S. many short distance links have been in operation for a few years. For example, in 1977 the General Telephone Company of California inaugurated an optical

fibre link between its main exchange in Long Beach and a local exchange in Artesia, a few miles away. Last year, General Telephone and Electronics, GTE, announced it was to install a 4.5 km link between two exchanges in Fort Wayne, Indiana, which is designed to carry 672 simultaneous telephone calls on a single pair of glass strands.

In Britain, the Post Office has been anxious to speed up the transition from development systems to practical commercial

designs. At the beginning of this year it ordered several million pounds' worth of optical fibres for the public telephone network. STC alone received £2m worth of orders.

Elaine Williams

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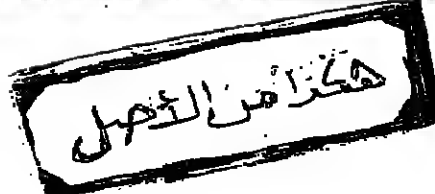
transparent, it can be integrated with a DSX40, for example, and used for office to office transmission of data, text and image information. And as an EBX is based on a modular concept, it can be tailored in both line capacity and facilities to suit the needs of any organisation, at any time.

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Highlight on business communications



Philips Telecommunications



PHILIPS

Pressure on telecommunications authorities

THE WORLD'S telecommunications authorities are under pressure. Their ability to provide efficient communications services is being questioned, and the monopoly status they have been granted for at least some of their services is contested.

The coming decade is certain to see changes in their mode of operation, and probably in their scope. The major issue at stake is liberalisation, breaking away from monopoly, and it is worth comparing the arguments for and against.

First, let us define the crucial term. Most authorities — the generic jargon is PTT, from the French postes, telegraphes et telephones — possess a national monopoly over the services they offer. Nearly all have a transmission monopoly: that is, a monopoly of the cables and exchanges which carry and switch calls. Many have a monopoly over the supply of some or all of the telecommunications equipment used by subscribers. They usually do not manufacture it, but they control its supply and are the main customer of the domestic manufacturers.

This liberalisation, which is in vogue in this context, means cutting into the areas covered by monopoly, and allowing private suppliers of services or equipment to compete with the PTT.

Complacent

In general terms, the monopoly, whole or partial, is the status quo: the forces for liberalisation can and do present themselves as modernising influences within a system grown complacent by its own privileged position.

The case for liberalisation is argued, in the first instance, on technology. It runs like this: developments over the past five years, particularly in micro-electronic technology, have produced a range of equipment and services which businesses, and some private subscribers, increasingly need or want.

In most states, the equipment and services are provided by the PTTs, but inefficiently: the sheer fact of centralisation means that marketing is unwieldy, unresponsive to signals, subject to supply delays and often constrained to supply out of date equipment. It is also likely to favour national suppliers, which may not have access to the most advanced technology.

The argument is strengthened by the increasing use of data, and the concomitant need to transmit it nationally and internationally. Here, the circuits leased for data transmission are usually under PTT control but, the argument runs, could be used more efficiently if the lessees could sub-let them to third parties, adding value to them by offering extra services as they did so.

The fast growth in data operations, and the demand for the modems (modulators-demodulators) required to convert the signals before and after transmission through the network, has caught the PTTs somewhat on the hop, and there have been and are delays in supplying equipment — a further argument for the liberalisation lobby.

The points are made by a recent submission to the UK Government by the Association of Telecommunications Users, a newly-formed business pressure group. It says: "The Post Office has had to cope with more of its own attachment products each year. Each new product means organising suppliers, forecasting demand, gearing production to forecasts, drawing up and distributing documentation, training staff, organising spare parts, and so on."

"With the increasing number of attachments that the Post Office is trying to manage — it had issued over 1,600 licenses by 1977 and has recently announced over 30 new products which it is in market itself — it is not surprising that difficulties occur. These difficulties are not necessarily due to bad organisation within the Post Office. They are the inevitable result of a single organisation trying to handle such a large number of rental products in an environment of rapidly changing technology — in fact, an impossible task."

"If this is allowed to continue, it will be the high-technology companies, on whom the future of this country depends, which will suffer, along with companies with a need for rapid and diverse types of communication. It appears that protectionist policies have failed to work as the UK balance of payments is already adverse in many of these markets."

Shifting tack slightly, the argument emphasises the central role communications is now playing, in society. The "informa-

tion age", it is argued, will demand decentralised communications, greater use of satellite communications which in turn are less obviously the preserve of a natural monopoly, and improved access to private, dedicated networks.

Finally, the argument can be political, subsumed under a general philosophy which emphasises free competition in a market environment as being desirable both for efficiency and for freedom. While this approach naturally lacks the precision which the technological argument claims to possess, it is more pervasive.

The argument against liberalisation tends to concentrate on the role of the PTT as a service organisation, concerned to provide uniformly efficient and available services to the entire

population. The argument frequently deployed is that some services will never be economic — for remote communities, where the return will never justify the investment on commercial grounds. Thus revenue from profitable operations must be used to subsidise these systems in order to provide equal standards.

Mr John deButts, who retired last year as chairman of AT&T, the U.S. private company which controls most of the country's network, expressed in a ringing interview the classic argument in favour of monopoly — though an argument which was forced to take account of the liberalising forces.

He said: "Long ago, it was recognised that the telephone service was one of these activ-

ities that could be carried out more efficiently and economically by one enterprise than by two or more. What I've been trying to say is that before we abandon that notion altogether we'd better look down the road to see what will happen to the quality and cost of service if we do... really what is at issue is how the common costs of communications services will be allocated among various classes of users."

Tilts balance

"Traditionally that allocation as a matter of policy has favoured the residential telephone customer in the interest of assuring the affordability of the basic service. Competition tilts the balance to the interest of the large business user..."

(Telecommunications magazine, February 1979).

Much of that defence would be echoed by publicly-owned PTTs. They would further add that national communications strategy is best served by a public corporation, accountable to Government, which has a clear duty to provide public services and considerable leeway about how to finance them.

Attempts to "cream off" revenue, particularly through ending the monopoly on the supply of networks, would weaken this ability by depriving the loss-making services of sufficient cash to fund them to a proper level of efficiency — precisely deButts' point when he talks of serving the interests of large businesses.

On apparatus, the argument used is often that of standards

and safety, together with one which stresses that only a large corporation can guarantee adequate servicing on a national basis.

Most PTTs, including the British Post Office, recognise that they can be slow to respond, and most, again including the Post Office, are developing more aggressive marketing departments, just as Bell did about five years ago. They remain convinced, however, that public service and competition are irreconcilable, though can often work together under general PTT control.

Here too, there is a political argument, which stresses the desirability of public ownership, especially in those areas where there is or could be a monopoly. Attempts to liberalise existing monopolies will thus attract

hostility from parties of the Left, and often from trade unions.

While a general evaluation of the strength of these arguments would be desirable, it is likely to remain an impossible task. Monopolies can work well or badly. Compare the highly efficient Bell network of, say, ten years ago with the chaotic French system of the same period.

Also they can work badly in some periods and well in others. Contrast the French system ten years ago with the transformed French system of today. In Europe, the whole problem is now a matter for debate, and if that itself stimulates efficiency in the PTTs, it will be worthwhile.

John Lloyd

Lucrative contracts for telephone makers

THE TELECOMMUNICATIONS equipment market worldwide this year is estimated, by the U.S. consultants A. D. Little, to be worth more than \$28bn. For the major manufacturers listed in the accompanying table, it is a lucrative and fiercely competitive market.

The markets for telecommunications equipment may be broken into two parts, the committed and the uncommitted, and an understanding of these terms, though they are imprecise, provides a useful guide to the manufacturers' strategies.

Broadly speaking, the committed markets, are those countries — generally advanced economies — which have an indigenous telecommunications manufacturing industry of some size. The U.S., Japan, and all of the major European states are in this category.

Rudimentary

The Eastern European economies manufacture the bulk of their own equipment, though they also make substantial purchases from the West of the most modern exchanges; while developing countries, as some Latin American states, India and Egypt, have either founded a

telecommunications industry or are in the process of doing so.

Thus the committed market shades into the uncommitted one, the core of which is formed by those countries which lack an indigenous industry or have only a rudimentary one, or which still need to import a large amount of advanced equipment.

Thus the boundaries are vague. Further, there are significant shifts within these broad market sectors which further qualify the overall descriptions. Within the committed market, pressures to liberalise the purchase of equipment by the telecommunications authorities are beginning to result in the development of a freer market — though the trend is not yet strong and may be reversed.

The leader of the liberalisation movement has been the U.S., where a series of decisions taken by the Federal Communications Commission have progressively cut back the monopoly which AT&T — or Bell — had enjoyed. The net effect so far has been to allow manufacturers to sell subscribers' apparatus direct to the consumer, and to provide a range of transmission services.

In Europe, both the UK and West German Governments —

especially the former — are actively examining the possible liberalisation of their PTTs' monopolies to allow a relatively more open market in equipment. However, these moves are hedged with difficulties which make a number of manufacturers somewhat cynical as to their ultimate value to them.

The first of these difficulties is that liberalisation of itself does not appear to significantly affect the pre-eminence of the agency which controls the network, whether it be a private company, such as Bell in the U.S., or a PTT, as elsewhere. The network authority has the twin advantages of enormous investment in plant and an extensive service organisation; in most services, it is able to guarantee more security to the user.

Second, the network agency will tend to continue favouring either its own manufacturing organisation — as Bell does with Western Electric — or its national suppliers, as the British Post Office does with GEC/Plessey/STC. The Bundespost does with Siemens and AEG Telefunken, and the French PTT does with Thomson CSF and CIT-Alcatel. This favouring of main switching equipment, most marked in the case of a further feature of the com-

mitted market should be emphasised. Most of the large telecommunications companies have a large base in it, which they use as a springboard for the uncommitted market. In some cases, the move into this area has been made only fairly recently. Bell's manufacturing arm, Western Electric, emerged into world markets about five years ago and has made its presence felt with large contracts in Saudi Arabia and South Korea.

Major supplier

For others, classically ITT, the world has always been its marketplace. ITT has "national" companies throughout Europe and Latin America which are often so well dug in in the host country — as STC is in the UK — that it benefits from PTT orders on roughly the same terms as the indigenous suppliers.

Philips, the Dutch multinational, is in a similar position, though less strongly. Its UK Pve subsidiary — recently merged into a comprehensive business systems division — is a major supplier of apparatus, but not of main switching equipment. Again, some companies, such as GEC, Plessey, Italy's state-controlled SIT-Siemens and, until recently, France's Thom-

son and CIT-Alcatel, have served their home markets in switching to the detriment of export orders, generally because they have lagged or been forced by their PTT to lag in switching technology. At another extreme, Sweden's Ericsson, with a small home base, has majored on exports with some success.

In the uncommitted market itself, the major companies find a much freer market, but also a much riskier one. The prizes can be large; the contracts one by the largely European consortia in Saudi Arabia and in Egypt over the past three years, are in the \$1.5-\$3bn range (precise figures are impossible to obtain, because the contracts are fluid and are usually extended).

At the same time, the difficulties of creating what is virtually a telecommunications authority from next to nothing, or on the back of outdated equipment, are so formidable that costs can escalate hugely and profits may be slow to materialise, or may never do so.

Naturally, then, competition is intense. Most of the major companies now have advanced, digital-electronic exchanges on the market, which are their flagbearers for entry into overseas markets. All make extravagant claims for their systems, claims which exaggerate the

differences. In the reality of world telecommunications markets, money is more important than technology.

The case of the \$1bn-plus Egyptian contract illustrates this very well. This deal, originally considered a walk-over for a U.S. consortium composed of Western, GTE and Continental Telephone — at least in part because Continental did the original study on which the contract was based, and because Egypt was then politically and economically very close to the U.S. — was "stolen" from the U.S. companies by a European consortium made up of Siemens and Thomson CSF.

The terms of the Egyptian deal's financing dispel the mystery. The European consortium offered loans at 5 per cent over 30 years, with a 10-year grace period. Naturally, the banks offering the finance were underwritten by their Governments.

The U.S. companies, which were aware of the offer before the deal was closed, tried hard to persuade the U.S. Government to help them match these terms, but without success. The prize went to the softest loan — though there is much in the manoeuvrings for this contract which is still unclear.

John Lloyd

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COMMUNICATIONS VIII

Quiet revolution at home is nearer

COMMUNICATIONS in the home are on the brink of a minor revolution. But the coming changes will involve no dramatic disruption of our normal domestic routines. They will be assimilated smoothly because their chief instruments will be those most familiar of household objects, the television set and the telephone receiver.

The wave of the future is exemplified by two new systems, already publicly available in the UK and soon to enter public service in a large number of other countries. They are videodata and teletext, both methods of displaying textual information on a wide variety of topics on television screens.

The technical means used to achieve this end differ, however. A key distinction is that videodata systems, such as the Post Office's Prestel service, transmit information stored in a computer across telephone lines to a specially-equipped television set which converts it electronically into "pages". Teletext services, like the BBC's Ceefax and ITV's Oracle, are transmitted as part of normal

broadcasts to suitably modified television receivers.

Videodata is the more versatile of the two because it is "interactive," that is the user can feed instructions and information into the system as well as receive data. To call up a page, he presses buttons on a hand-held keypad.

With teletext, pages are transmitted in a fixed sequence, which means that if the user has just missed the page he wants he must wait up to half a minute until it comes round again.

This advantage gives videodata a huge field of potential applications in the home. It can be used, for example, to play games such as quizzes and puzzles. Simple messages like birthday greetings can be sent on Prestel from one set to another. And the system can be used to order and pay for goods and services.

The Post Office hopes that the recent development of a technique for displaying still colour photographs on Prestel will make it an attractive medium for mail order firms, estate

agents and others. Using his keypad, a subscriber could select a product, enter an order for it and instruct his bank to debit his account accordingly.

A videodata set can also be turned into a small computer terminal. Through a technique called tele-software, first developed by the systems house CAP-CP, a user can call up a programme from the central computer and store it in a local memory attached to his set. Using a keypad or alphanumeric keyboard, he can then perform quite complex computations at relatively low cost. One obvious home application is for calculating income tax returns.

Techniques aimed at giving teletext similar interactive capabilities are under development. But it will probably be some time before they become commercially available.

In the meantime, teletext's appeal over videodata lies chiefly in its lower cost. A teletext set costs only about £100 more to buy than an ordinary colour television, while a videodata set costs about £400 more. More-

over, teletext users do not have to pay the page and telephone charges borne by Prestel subscribers.

Chiefly for this reason, and because of its lesser technical complexity, teletext has been quicker to establish a market than Prestel. About 40,000 teletext sets have been installed in Britain, against only about 3,000 Prestel receivers, the great majority of them in offices.

First priority

The Post Office is convinced that the key to Prestel's success lies in the development of a large residential market. But it has been criticised for trying to achieve this objective too quickly. The set manufacturers say it will be another three years at least before they can market Prestel sets at a price comparable to that of teletext receivers and argue that the first priority should be to exploit the business market.

An interesting contrast to the Post Office's approach is to be found in France, where the government is pushing ahead on

all fronts to modernise the communications network. As part of the programme it plans to replace printed telephone directories with electronic terminals linked to a computer data-base. Facilities for facsimile transmission between homes will also be made available.

The French Government claims that the money saved on printing costs will enable the electronic directory terminals to be distributed free of charge to every telephone subscriber in the country. Subscribers to Teletel, the French videodata service, and to the teletext system will still have to buy or rent their own sets. But, it is argued, their interest in doing so will be aroused after living with the electronic directory terminals.

Meanwhile, telephones are becoming available in a greater variety of shapes and sizes, and with more features, than ever before. As usual in telecommunications, the way has been shown by the U.S., where a relaxation of federal regulations has allowed a number of com-

panies legally to offer telephone sets and equipment designed to replace Bell system devices.

In Europe, the national telephone authorities have so far been more successful in keeping their private sector competitors at bay. But signs of change are in the wind, and telephone authorities in several countries are under pressure to relax their traditional monopolies. Faced with this prospect, they are starting to offer subscribers a wider choice of equipment.

The British Post Office, on the future of whose monopoly the Government is expected to pronounce soon, has recently launched the first of a new generation of telephones designed to accompany the introduction of the System X all-electronic exchanges in the UK.

The telephones, as well as being designed to work with a digital telecommunications network, embody a number of special features, such as facilities for storing frequently-called numbers and for repeat dialling of numbers that are engaged.

Guy de Jonquieres

Social change monitored

THE SOCIAL implications of the major changes in communications on employment, home life and health provide several major problems for unions and management alike in industry and the public services.

The telecommunications industry and the postal services will be affected more immediately than any other sector in the change in communications "methods". The Monopolies Commission report into the London postal services this month suggested a switch to electronic mail and a reduction in letter traffic during the 1980s.

Manpower is expected to fall by between 20,000 and 30,000 over the next 10 years. Reductions in clerical and counter staff will be offset by an increase in other staff, notably engineers.

The development of the electronic office with word processors, automatic answering machines, facsimile machines and optical character reading is likely to lead to a higher and more personal service from staff, according to a Department of Employment study.

Trade union concern at the social implications of new technology was expressed more generally recently by Mr. Roy Grahame, general secretary of the Association of Professional, Executive, Clerical and Computer Staff.

He told a London conference that Manpower Service Commission estimates put the level of redundancies caused by the introduction of new communications technology at 200,000 by 1982. The trade union movement should not allow these groups of workers to be the scapegoats, he said.

Trade unions have seriously considered new technology for the past three or four years. Officials are anxious not to appear Luddites and the emphasis is on the acceptance of new methods, provided there are adequate safeguards for working conditions and employment.

To achieve this, the TUC believes there should be full consultation before employers decide to buy new equipment, that joint union-employer machinery should monitor developments and that health and safety representatives

should be involved in negotiations. Redeployment and relocation arrangements will also be key issues.

The TUC also views itself as a clearing house for new technology agreements. Communications-related areas form the key sectors covering the printing industry, office equipment and the telecommunications field.

Several unions have drawn up model agreements for negotiation to follow when discussing the introduction of new equipment. These generally follow the recommendations of the TUC Employment and Technology document.

Legislation

Collective bargaining over new communications systems is in many ways hampered by the weak union representation in the office sector, where the bulk of new technology is being introduced.

Trade unions are placing strong emphasis on health and safety legislation as it relates to the operation of visual display units which it has been claimed, can harm the eyes.

Last October, ASTMS published a guide to health hazards in the office sector, where the bulk of new technology is being introduced. The guide argued that term damage was being done to the eyesight of operators. But the union ruled out any suggestion that entry into the sector should be restricted to preclude any worker with eye problems or over the age of 35. Studies have suggested that these two groups should be excluded.

Instead, the union laid down guidelines to split up and shorten working hours.

The Confederation of British Industry, in a staff discussion document published in January called *Jobs—Facing the Future*, believes that redundancy problems caused by new communications will not be severe. On the clerical side, it expects that there will be fewer clerks, typists and telephoneists in future, but more higher-grade clerical staff. The balance of advantage lies with improvements in quality rather than in job security, it argues.

Gareth Griffiths

Strong market for facsimile transmission

IN SPITE of futuristic talk of tomorrow's office being entirely free of paper, few people doubt that printed words and images will remain an important part of business communications for some years. Probably the best evidence of this is that many manufacturers now gearing up to supply integrated electronic office systems are including facsimile transmission, along with copiers, in their product ranges.

A major attraction of facsimile is of course that it can be used with equal ease to transmit both text and graphics. Unlike a telex or teleprinter, a facsimile machine does not identify individual characters on a page. Instead, it treats material as an assortment of black, white and grey areas which are "read" by a scanner moving over the page.

The basic technology of facsimile transmission has been around for many years. Indeed, the first machine pre-dated the

invention of the telephone. But it is only within the past 15 years or so that the market has begun to develop strongly as machines have become more accurate, reliable and versatile.

A number of factors have contributed to these improvements. Better telephone communications have led to more accurate transmission of information. Mechanical components have become more sophisticated; on the latest copiers, the page to be transmitted is no longer placed on a rotating drum but remains stationary and is read by a moving scanner. At the receiving end, developments such as ink-jet printers and the application of xerographic techniques have resulted in clearer reproduction.

Microelectronics have had an impact, too. Some functions which used to be performed mechanically are now done electronically, giving greater reliability at lower cost. Scanning, which was done photo-

electrically, is now often carried out by means of a tiny charge-coupled device. Machines have been made cleverer as well: many of them can now receive automatically, without requiring a human hand to switch them on.

Signal varies

Probably the most important single advance, however, has been the application of digital techniques to facsimile transmission. Older types of machine, which take up to six minutes to transmit a standard page, use analogue representation: the scanner reads the page and transmits a waveform signal which varies in amplitude depending on whether the area being read is dark or light. The scanner's movements are duplicated exactly by the stylus reproducing the page at the receiving end.

In the new digital machines, the scanner does not read the page continuously but takes

periodic samples at a very high speed, 4,800 times per second. If a sample is white, a signal is generated. If black, there is no signal. Black areas are reproduced at the receiving end by a series of tiny dots spaced so closely together that they are barely distinguishable.

Because of the frequency of sampling, information would take a long time to transmit if it were sent in this form. To reduce transmission time, a technique has been developed to ensure that only the minimum amount of data needed to reproduce a page is actually sent. It is based on the principle that on an average page, large areas are white and can be treated as big "blobs" rather than being broken down into millions of tiny individual pulses.

To do this, each scanning line is divided into 1,720 spaces, known as pixels. A pulse is sent only when a pixel differs from the one immediately pre-

ceding it. The number of signals generated in transmitting a typical page is reduced by a factor of 10 or 15 and transmission time cut to less than one minute. The only sacrifice, of course, is that grey shades cannot be reproduced on digital facsimile.

This type of facsimile machine, which has been under particularly intensive development in Japan, is well suited to the digital switching and transmission techniques used in the most advanced telephone systems. These provide much more accurate communication than the traditional analogue telephone networks because the quality of the signal is not affected when it is regenerated by repeaters spaced out along trunk lines.

Facsimile transmission is expected to play a major part in the development of electronic mail during the next few years. Macintosh Consultants, who analyse the electronics industry,

believes that the number of facsimile terminals in operation in the U.S. and Canada will double to more than 400,000 between 1978 and 1987, while the number of items sent daily will more than triple to 2.2m from 2.5m. The growth rate in Europe is expected to be even more dramatic, with the number of terminals rising to more than 200,000 from about 30,000 and the daily volume soaring to more than 7m from fewer than 500,000 in 1978.

Colour facsimile machines may also be on their way. Most of the technology needed is available, but it will probably be some time before they are brought to market because they require very high-speed telephone links which are unlikely to become widespread until the middle of the next decade at the earliest. They will also be expensive, costing three times the price of black and white machines.

Guy de Jonquieres

Trade unions have seriously considered new technology for the past three or four years. Officials are anxious not to appear Luddites and the emphasis is on the acceptance of new methods, provided there are adequate safeguards for working conditions and employment.

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Gareth Griffiths

IN AN UNCERTAIN DECADE COSSOR TECHNOLOGY OFFERS CERTAIN ADVANTAGES

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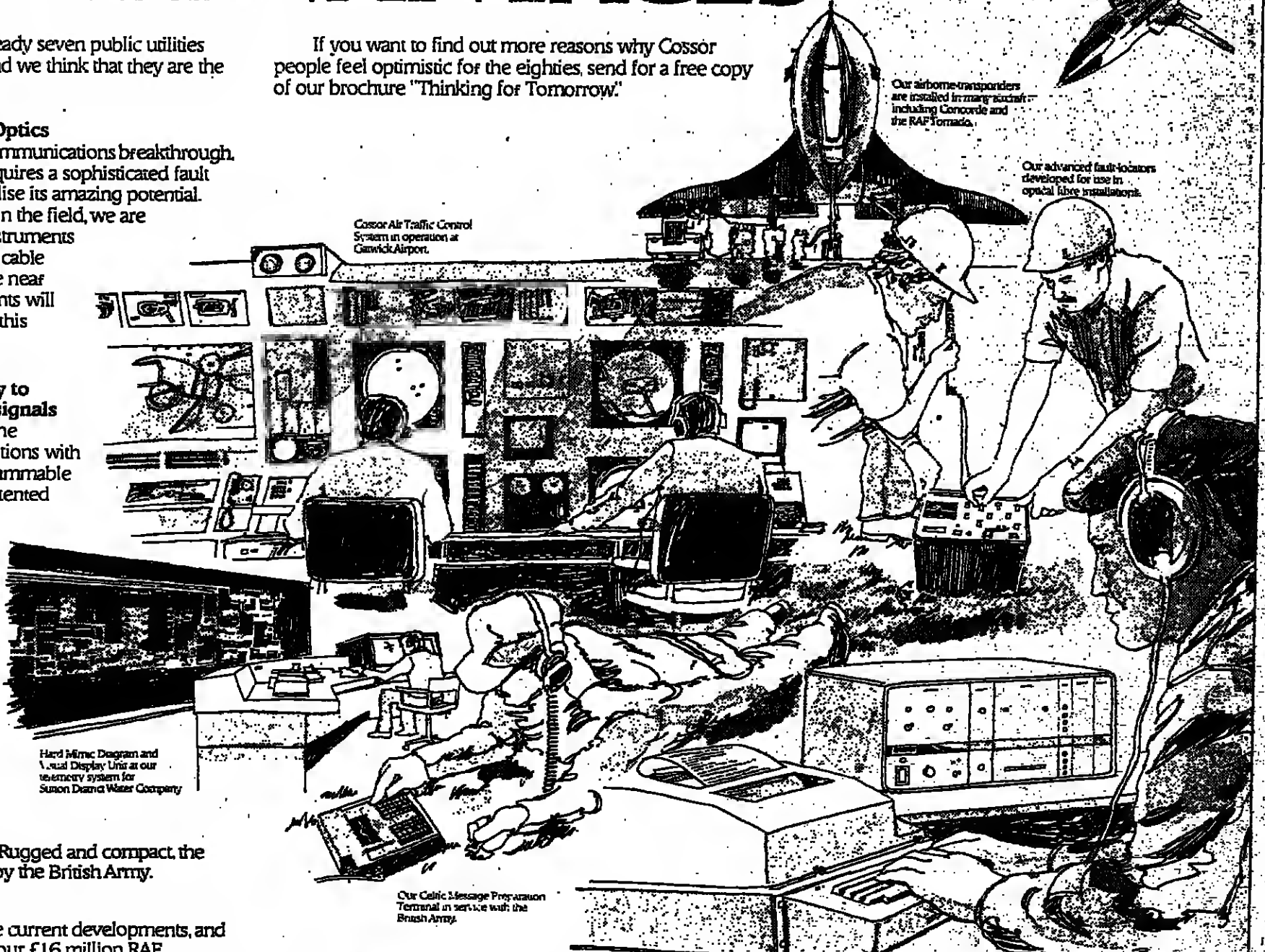
The Celtic is a tactical message terminal, using a Cossor modem. Developed as an aid to security, it can store and edit messages, and then transmit them in a short burst. Rugged and compact, the Celtic has now been ordered by the British Army.

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If you want to find out more reasons why Cossor people feel optimistic for the eighties, send for a free copy of our brochure "Thinking for Tomorrow."



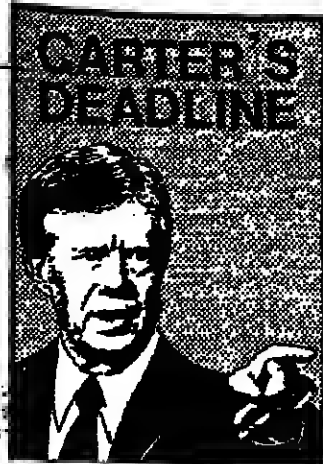
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Thinking for tomorrow

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electronics

Our Foreign Affairs Editor's view of the strains within NATO

Why west Europe must follow Washington



IT IS increasingly clear that the United States and Western Europe are on a collision course. The Americans obviously think that the Europeans are doing less than they should to support American policy over the invasion of Afghanistan, and less than they should to support American interests over the hostages held in Tehran.

To be sure, the West German Government is reluctantly preparing to follow Washington's lead with trade sanctions against Iran, but even as Chancellor Helmut Schmidt was speaking during the week-end, President Carter's TV interview clearly suggested that the U.S. is no longer willing to rule out military action against Iran. Herr Schmidt's sombre evocation of the events leading up to World War I may seem a shade alarmist at this stage, but the evidence of disarray in the Atlantic Alliance cannot be gainsaid.

A great deal of ink has been used in discussing whether it is the Americans who are pursuing a series of misconceived foreign policy initiatives, or whether it is the Europeans who are behaving badly towards their northern ally. But the question which really needs to be faced is whether the current disputes between Europe and America are the consequence of contingent and remediable shortcomings in the actions of one side or the other, or whether instead they are the manifestations of a deep-seated and structural difference between the two sides of the Atlantic.

There are of course wide variations between the European countries in their reactions to American policy in south-west Asia. But it is striking that the British Government, which was the loudest in its support of President Carter over the Soviet invasion of Afghanistan, is not endorsing Carter's policy of trade sanctions against Iran.

In one sense we are all deeply aware of the trans-Atlantic structural differences: America is a super-power, while even the largest European countries are only middle-ranking powers; America is a global power, at least in aspiration, while Europe's preoccupations are primarily regional — if not parochial. But then there is the Atlantic Alliance. The question is does the Alliance, can the Alliance bridge the structural differences, or do these structural differences pose a threat to the Alliance?

There is an authoritarian American view, eloquently expounded by Mr. Peter Jay in a recent issue of *The Economist*, to the effect that if the Europeans want to retain the advantages of the American alliance, they had better get in line quick, otherwise Nanny will smack them. No doubt this is a view widely held in the U.S., and it is an explicable reaction to the frustrations engendered by the administration's failure to persuade the Ayatollah Khomeini to release the hostages. But while it may be explicable, it is not, for all that, a particularly helpful way of looking at things.

For what it implies is a willingness to bring into the open not merely the fact that the Alliance is more indispensable to the Europeans than it is to the Americans, but the inference that the Americans will feel less committed to the Europeans in the NATO area if the

Europeans do not increase their commitment to the Americans outside the NATO area.

Now there are reasons to explain America's dissatisfaction with Europe's preference for playing a regional rather than a world role. The first is that the U.S. finds it very hard, for reasons of geography as well as of the lack of any clear geopolitical strategy, to play the role of a global power by itself. The second is that while for a time during the Vietnam war Americans may have persuaded themselves that they were fighting on behalf of the free world, they could not claim that European countries stood to gain any particular national advantage either way out of the conflict, apart from the gratification of *schadenfreude* among those Frenchmen who bitterly remembered their own defeat in Indo-China.

Oil factor

In the case of the hostages in Tehran, however, they find it easy and convenient to assume that European reluctance to adopt an aggressive stance is motivated solely by the need to jeopardise supplies of Iranian oil. Now it would be surprising if European governments were not concerned by the oil factor; but it would be equally surprising if they did not weigh up what they thought were the objective chances that diplomatic or trade pressure on Iran would in fact succeed in strengthening the hand of the Iranian Government against the militants at the U.S. Embassy, or in persuading the Ayatollah to renounce his demand for the return of the former Shah.

If the U.S. is set on some sort of full-scale trade embargo against Iran, it may be worth considering the Cuban embargo; is one to suppose that the

appalling problems being endured by the Castro regime now are the result of a long-standing American blockade, or are they the internal consequences of the regime itself? It seems probable that, once Cuba became a dependent client of the Soviet Union, American hostility became for a number of years a unifying rather than a debilitating factor, and was a contributory element in encouraging Cuba's mischief-making in Africa.

The trouble is that the U.S. is facing a situation in Tehran which is probably not responsive to reason or to any pressure short of actions which would be counter-productive by threatening the lives of the hostages themselves. How many Americans must now be wondering whether the Administration was wise to have irrevocably renounced the Shah as a bargaining counter?

Dr. David Owen, the former Foreign Secretary, seems to think that the European countries should engage in trade sanctions against Iran merely out of loyalty to the Americans, even though he admits that this could help push Iran towards the waiting arms of the Russians, and is unlikely in any case to produce the desired result of the release of the hostages. Now there is a lot to be said for loyalty, but if that really is his assessment, he is drawing sensible conclusions?

But behind all these debates about ways and means of dealing with the hostage problem, which is essentially a debate about rational responses to an irrational and incoherent political system, there lies an American desire to have the European countries play a more forward role outside the NATO area in protecting western interests.

The trouble is that it is now a bit late for the Americans to summon Europe to play a global role. All the non-European



European allies: President Giscard (left): France stays out of NATO; Mrs. Thatcher (centre): intense reaction in London to the invasion of Afghanistan; Chancellor Schmidt: Bonn is preparing trade sanctions against Iran.

alliances like SEATO and CENTO have now died the death. Ever since World War II the Americans have been unremitting in their opposition to the colonial legacies of Britain, France and Holland, and with the independence of Rhodesia-Zimbabwe in the next few days the process of decolonisation is virtually complete. France continues to play a spasmodic neo-colonial role in West Africa, but the UK has long since surrendered most of its overseas military capability.

The fact is that the post-war priorities of decolonisation on the one hand, and a confrontation with the Soviet Union on the other, which in time gave way to a possibly self-deceiving policy of détente, have left indelible marks which cannot be erased simply by appeals to the notion of loyalty.

More seriously, it is difficult to deny that there may be a connection between the forward policy pursued by the U.S. in Iran when the Shah was in power and the imprisonment of the American hostages in the Tehran embassy today. This is

not to justify either Khomeini or the militants, but there may be some question over the utility of interventionist policies, at least as they have hitherto been practised by the U.S.

It is not, however, enough for the European countries merely to stifle their reservations about the credibility and ineptitude of so much American foreign policy making, and only pay lip-service to the notion of trans-Atlantic loyalty with half-hearted diplomatic support. For despite their setbacks in Vietnam and Iran, one must assume that the Americans will continue to attempt to play a global foreign policy role, at least for a while. The dilemma is that if the Americans and that, for a variety of reasons starting with geography, they cannot in practice play this role by themselves with any success, they may gradually renounce the attempt.

But if that should happen, one cannot exclude the possibility that a reappraisal of America's international role would cover the western European as well as the

defence of Western Europe has already been profoundly modified by the development of Soviet parity in strategic nuclear weapons, which could conceivably become superiority. It is now very difficult to believe that the U.S. could risk a strategic exchange in response to a conventional Soviet attack on Western Europe; that is why NATO, of course, to the strengthening of theatre nuclear weapons on this side of the Atlantic with the clear implication of a decoupling between the two halves of the Alliance. The Vietnam war and the American balance of payments deficits prompted numerous attempts in Congress to get a withdrawal of American troops from Europe — such attempts could be revived.

What is at stake for the European countries in Iran and Afghanistan is a great deal more than the safety of the American hostages or the holding of the Moscow Olympics. President Nixon used to boast, misguidedly, that he thought he could restrain the Soviet Union by representing himself as a polarising machine. The problem for us today is that events in the Middle East — added to electioneering between Mr. Carter and Mr. Reagan — could drive the U.S. into actions which could be profoundly damaging for everyone. European Governments may genuinely believe that less damage will be caused if caution is the watchword. The question that needs to be asked is, will European caution help to drive the Americans into being dangerously incautious in ways which could seriously damage the Atlantic Alliance, even if they do not actually threaten the peace of the world?

Ian Davidson

Letters to the Editor

Rights and ownership

Sir,—Both Mr. Brittan (London, April 1) and Mr. Oakeshott (April 10) are correct to seek ways of extending the rights of citizens in the area of work and more generally in terms of possession of material goods.

Both gentlemen referred either directly or indirectly to the importance of increasing ownership—or at least increasing the right to ownership—of property.

This is really rather puzzling. How can you own a job or skill, Mr. Brittan? If two people are equally well trained, the one hard, April 2) and Mr. Oakeshott still work the other into unemployment if he is prepared to sell his product at a lower price than his competitor. Similarly, how can you own land, Mr. Oakeshott? Can you preserve it?

Can you stop the powers of nature acting upon it for better or worse? Can you control its innate potential? Would it not be more accurate, and economically revealing, to urge the enshrinement in our system of the right to use? The right to use skill, to use land and therefore by implication the right also to have access to land that is not being used.

Owning unused skill is destructive of human dignity and purpose, and the presence of unused skills in society is very often a reflection of the extent to which there is unused land in both urban and rural areas although, because we continue to allow the right to ownership of unused land and buildings, there is a very real financial advantage to the particular "owner" of those items. But to degrade one man's dignity through such practice is to degrade one's own humanity.

Is there any reason why we should not pursue dignified usage rather than perilous ownership?

Adrian Gray,
21, Russell Road,
Wimbledon, SW19.

Pension fund guidelines

From Mr. B. N. Welch
Sir,—Christine Muir's article on April 9 rightly highlights the case for greater scrutiny of the investment strategies of pension funds. An equally important aspect must be scrutiny of the way occupational funds treat the various categories of potential beneficiaries.

A glaring example is a member transferring employment: when he transfers to another fund or vests his accrued pension in his original fund, he may well suffer an appreciably worse deal relatively speaking than members who remain. Moreover, this treatment can be the result of discriminatory actuarial judgements rather than explicit rules of the fund. There the fund is taking the part of the employer who feels little obligation to a departing employee.

Of course, an occupational fund has to cope with a variety of individual experiences, and it does that on a mutual basis so that it is inappropriate to think purely of a member's discrete "account." But equally it must be wrong when pensions have become a major aspect of an employee's remuneration, that

there should often be such a high level of predictability and apparent inequity of treatment between members, who can reasonably expect to be treated on a reliable and equitable footing.

B. N. Welch,
Red Gables,
Spring Elm Lane,
Little Baddow,
Chelmsford, Essex.

Vehicle repairs

From K. A. Mansfield
Sir,—Ronald Beale misunderstands Thatcham (the Motor Insurance Repair Research Centre financed by the British Insurance Association and Lloyd's) in his letter in your issue of April 11.

Crash repairs cost over £500m each year; therefore it is clearly in the interests of insurers and their policyholders that repairs to damaged motor cars are carried out cheaply and efficiently as possible.

New equipment is evaluated and demonstrated but the main thrust of activity is towards encouraging the most effective use of equipment in most repairers' hands and solving repair problems associated with new models.

K. A. Mansfield,
Thatcham,
Aldermore House, EC4.

Safety of life at sea

From Commander J. M. S. Ekins (Reid).

Sir,—As an ex-mariner and an active yachtsman I would like to add a further comment to James McDermid's article of April 10 ("How rogue ships escape international maritime law").

The article reminds us that the Traffic Separation Zones in the English Channel were changed on January 1, 1979, at the insistence of the French Government. Though I take an interest in such affairs I had only a feeling that something had changed, and had failed to note the exact details. Shortly before making a cruise to Brittany in July 1979 I approached a number of chart retailers in London and in the

Mining machinery

From the Director-General of Mining, National Coal Board, and others.

Sir,—We refer to the article on public sector technology of March 18 and the specific reference to the NCB. We refute the contention that the balance of the R and D effort between the NCB and their suppliers is such as to inhibit the export effort.

Since 1973-74 when the NCB's Plan for Coal was launched, exports of mining machinery have grown in value from £26m to £100m in 1979. This substantial increase in overseas earnings has arisen from the combination of a free home market and close collaboration in research and development. There is a much greater R and D effort carried out by the suppliers than has been indicated.

The NCB are currently funding trials of new products developed by suppliers at an annual rate of £13m; obviously the combined R and D effort by these companies must be much higher as this sum merely

Southampton area to ensure that our charts were up to date. At that time pressure on Civil Service industrial action (and possibly also for reasons connected with the change of IALA (International Association of Lighthouse Authorities) Buoyage in the area, but I am not sure) no Admiralty charts were available of the area. Without the embarrassment of naming firms, it is widely known that there are in general two companies who provide special charts for yachtsmen in this country. Charts of the Channel area by one of the firms did not seem to be available anywhere.

I was therefore obliged to buy charts by the remaining firm, which is based in Huntingdon. While it is true that the chart containing the Casquets area arrived with the usual amendment slip, I was horrified to learn that it was still being printed in July with the wrong Traffic Separation Zones shown. There was no special warning of this danger, and many yachtsmen or other boat users may well have ignored this fundamental point amidst the mass of detail in the amendment slip.

Even if yachtsmen may be thought to be nimble enough to avoid large ships by prudently altering course (an unwise assumption), there have been numerous recent occasions of them being prosecuted for not crossing the separation zones at right angles.

I suggest that until the authorities recognise the dangers incurred through this type of chain of circumstances and promulgate them more widely we are not taking the safety problem really seriously. J. M. S. Ekins,
Chapel Cottage,
Easton, Winchester, Hampshire.

Living on the breadline

From R. C. Scholl

Sir,—Many thanks for having the courage to print Miss Catherine Ford's letter in your paper today.

No Miss Ford, people cannot live on £33.40 unemployment benefit.

In the last year or so I have been helping people who are on low incomes, and they find it

tough. Just recently, at a lecture I gave I quoted a particular figure, slightly more than the one above, and the audience gasped in disbelief.

Please, Mr. Editor, will you take Miss Ford's advice and prepare an article on how people live on £33.40 rather than £12,000.

R. C. Scholl,
R. C. Scholl and Associates,
25, Westbourne Avenue, W3.

Newcastle's finances

From Mr. J. H. Bescooby.

Sir,—Councillor Jeremy Beecham's defence of Newcastle's financial position (April 5) lacks evidence. It is encouraging to read that "the city council has... undertaken a systematic review of all areas where unit costs appear to be higher than the average." This must cover a wide spectrum of the city's activities and services and I look forward to the publication of the results of this review. Greater efficiency in the typing service is, of course, a worthy objective but the approach adopted, that of discussion with the relevant trade union can be only a first step. Such discussions, particularly in local authorities, may be productive more of reasons for maintaining the status quo rather than of ideas for fundamental change in methods of work.

Important changes in administration and organisation, designed to bring about the more efficient use of resources, can rarely be achieved without difficulty and some opposition and I would have been happier had the leader of the council displayed a greater awareness of this. Quoting from the final paragraph of his letter: "There are clearly savings to be made and Newcastle, if humanely possible, will make them." If "humanely possible" were to be replaced by "if humanly possible" I would be more convinced of the council's determination to tackle its problems, even to the extent of adopting measures which would be unpopular in certain quarters.

J. H. Bescooby,
The Old School House,
Grosvenor, Lifford, Surrey.

are seized.

We regret that your article, based on the recently published report by the Advisory Council for Applied Research and Development, should have diminished to such an extent the significant achievements of the whole of the British mining industry in the export sector.

R. B. Dunn,
Director-General of Mining,
NCB.

R. H. Thorpe,
Chairman and Managing Director, Anderson Strathclyde.

A. D. Nicol,
Chairman,
NEI Mining Equipment.

A. Kaye,
Chairman and Managing Director, Gullick Dobson.

D. Morgan,
Managing Director, Mining Division, Dowry Group.

K. C. Miller,
Deputy Chairman and Managing Director, Dosco Overseas Engineering.

National Coal Board,
Hobart House,
Grosvenor Place, SW1.

represents the negotiated prices for the machinery put to work. It is a programme with a high success record from which new developments have subsequently been marketed both for home and export.

In all cases of new development proposed by the NCB, they discuss with their suppliers the impact of their specifications on the export market and, wherever possible, modifications are studied with export promotion in mind. This is quite the reverse of what is contended in your article. The NCB also give maximum help to receiving inward missions of potential customers in their mines to show them British equipment at work, and provide technical personnel to support outward missions in search of new business.

British Coal International, which was set up two-and-a-half years ago, brings together in a unique way all branches of British mining, whether in the producing or manufacturing sectors, to ensure that the maximum export opportunities

Today's Events

GENERAL

UK: Building Societies monthly figures (March).

Sir Keith Joseph, Industry Secretary, speaks at Paddington Small Business Bureau meeting, Clarendon Court Hotel, London.

Mr. Neil Kinnock, Opposition Education spokesman, attends National Union of Mineworkers Midland Area annual conference, CHHS Hotel, Belper.

Overseas: Mr. Menachem Begin, Prime Minister of Israel, in talks with President Carter on Palestinian autonomy.

Lord Carrington (UK), Mr. Cyrus Vance (U.S.), Mr. Andrei Gromyko (USSR) and Mr. Jean Francois-Poncet (France) attend

25th Austrian Anniversary, Vienna.

Organisation for Economic Co-operation and Development meet on Turkey aid package, Paris.

European Parliament in session, Strasbourg.

Mr. William Whitelaw, Home Secretary in New Zealand.

Mr. Henri Simonet, Belgian Foreign Minister, visits Poland.

Venezuelan President Luis Herrera Campins continues official visit to France.

PARLIAMENTARY BUSINESS
House of Commons: Social

Security (No. 2) Bill: second reading. Insurance Companies Bill, remaining stages. Companies Bill, Lords amendments.

House of Lords: Social Security Bill, committee.

Select Committees: Defence. Subject: Defence Estimates.

Statement: Witnesses: Ministry of Defence (Room 16, 4.15 pm).

Foreign Affairs: Overseas development: sub-committee.

Subject: Development divisions of the Overseas Development Administration: Witnesses: Overseas Development: Administration.

tion. (Room 15, 5 pm).

COMPANY MEETINGS
Concorde Robotics, Concorde House, 221, City Road, EC1, 10.15. Midland Hotel, New Street, Birmingham, 12. Olives Paper Mill, Charing Cross Hotel, Strand, W.C. 12. Pentland Investment Trust, 3, Albany Place, Edinburgh, 12.

CITY OF LONDON LUNCH-TIME MUSIC
St. Peter-upon-Cornhill, organ recital, Susan Farrow, 12.30 pm.

St. Lawrence Jewry next Guildhall, Gresham Street, Jaggerdehor Bensheim, 1 pm.

City Music Society, 230, Bishopsgate, Ian Hobson, piano, 1.05 pm.

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Companies and Markets

UK COMPANY NEWS

Glaxo down by £6.18m for first six months

ALTHOUGH EXTERNAL sales for the six months to December 31, 1979 increased from £268.2m to £295.9m, taxable profits of Glaxo Holdings, pharmaceuticals, food, surgical instruments and hospital equipment group, showed a drop of £6.18m to £30.32m, compared with the same period of 1978. However, the directors point out that 1978 was an exceptional year for the first half higher than those of the second six months.

This year, the directors expect a return to a more normal pattern with the greater profits accruing in the second half.

For the year ended June 30, 1979, pre-tax profits had fallen from £36.36m to £72.27m.

Changes in exchange rates continue to put pressure on export margins and have reduced the sterling value of sales of overseas subsidiaries by £3m in the period, and the sterling value of their profits and net current assets by £1.5m.

Trading profits for the half year fell from £37.2m to £30.32m. Associates' contributions were down by £0.6m to £0.9m, due to a reduction in profits from the Japanese companies. Net interest charges fell £0.5m to £3.4m, while investment income was up £0.8m to £2.5m.

With SSAP 15 applied, tax took £10.2m (revised £12.2m). After minorities, the available balance emerged at £19.5m, compared with £23.8m.

Earnings per 50p share are shown as 11.5p (14.1p) undiluted and as 10.9p (13.2p) fully diluted. The interim dividend is effectively raised from 2.5p to 3.5p net, costing £5.92m—last year's total was 5p adjusted for the one-for-one scrip issue.

Sir Austin Bide, the chairman and chief executive, will relinquish the office of chief executive in favour of Mr. Paul Girolami, currently the financial director, when a new financial director has been appointed. This will not be earlier than October.

See Lex

Spain	Price	+ or -
April 11	248	-2
Banco Alibao	248	-2
Banco Central	248	-2
Banco Exterior	248	-2
Banco Hispano	248	-2
Banco Ind. Cel.	248	-2
Banco Madrid	248	-2
Banco Santander	248	-2
Banco Urquijo	248	-2
Banco Vizcaya	248	-2
Banco Zaragoza	248	-2
Onapades	248	-2
Espanola Zinc	248	-2
Fecsa	248	-2
Gul Precioso	248	-2
Hidroila	248	-2
Iberdrua	248	-2
Patrimonio	248	-2
Petrubier	248	-2
Socifesa	248	-2
Telefonica	248	-2
Union Elect.	248	-2

HIGHLIGHTS

A number of major company announcements are discussed in the Lex column. Some poor first half figures from Glaxo caused disappointment in the market. Margins were squeezed in dull trading and competition seems to be getting more troublesome. Elsewhere, Grand Metropolitan has come out nibbling away through the market most of last year it now proposes a formal tender offer. The arguments between Bowring and March McLennan have been settled and Bowring has agreed to slightly improved terms from the U.S. group. Finally Lex looks at the results from Standard Telephone and Cables which, in spite of the engineering strike, are better than the prospectus forecast.

Currys fall off in second six months

A SECOND half fall from £8.51m to £7.33m has left taxable profits of Currys, electrical appliance retailer, down slightly from £12.2m to £11.9m for the year ended January 23, 1980. Turnover amounted to £231.4m against £191.7m.

The dividend, however, is stepped up to 7.5p (5.08p) net per 25p share with a final payment of 6.5p.

Profits included interest receivable of £1.88m, compared with £960,000, and £488,000 (603,000) surplus on the sale of properties. But it was struck after amortisation and depreciation of £2.4m (£1.96m), and an increase in the provision for unamortised profit on credit trading of £911,000 (£832,000).

Tax for the year took £2.58m against £4.11m, leaving a net profit ahead from £8.03m to £9.32m. The difference between the historical and a OCA profit, amounting to £3.81m (£3.75m) has been transferred to current cost reserves.

comment

Despite a good start Currys has ended the year with disappointing results and the shares might have taken a beating were it not for the higher-than-expected dividend payout. In profit terms the second half contracted by 14 per cent against a background of weak demand. The problem is that the company has been slow to respond to new forms of retailing and competition from other consumer durable retailers such as Comet has been severe. Currys appears to have learned the lesson and is becoming more aggressive. There are changes in the pipeline to develop, for

example, a higher proportion of own brand merchandise. In addition the company is introducing a colour television rental operation and there are plans to enter the growing market for desk-top computers. These developments are only likely to bear fruit in the medium-term, so there is likely to be an interim period when margins will continue to be under pressure. During this period the strong cash position will make life that much easier. At 182p, the shares sell on a price/earnings ratio of 6.8p, while the yield is 6.9 per cent—a fair enough rating.

Sharp fall by Richards Leicester

TAXABLE PROFITS of Richards (Leicester), structural and mechanical engineer and iron-founder, showed a substantial fall from £524,579 to £154,818 for 1979, on lower turnover of £5.63m against £9.91m.

First-half profits had dropped from £224,242 to £83,000. Richards Foundries was hit by industrial disputes in the second quarter, while against a poor trading background Richards Structural Steel lowered its margins to obtain work.

Although earnings per 25p share are shown down from 13.4p to 11p, the net dividend total is raised slightly to 4.3p (4.2515p) with a final of 2.8p. Dividends absorb £86,000 (£85,500) leaving a retained balance of £133,980.

ICI chief says prospects 'distinctly uncertain'

BY ALAN FRIEDMAN

A DIFFICULT period was forecast yesterday by Imperial Chemical Industries. Sir Maurice Hodgson, chairman, told shareholders at the group's annual meeting in London that prospects for the coming year were "distinctly uncertain."

He said that although the predicted recession had been slow in coming, there was some evidence of forward demand slackening. The first quarter had started better than might have been expected, but it was going to be difficult to obtain the further price increases needed to offset rising costs, according to Sir Maurice.

Among the problems faced by ICI, he cited the current high level of chemical and man-made fibre imports, the effects of a future increase in oil prices, and the possible strengthening of sterling. The company, which had a pre-tax profit rise of one-third last year to £560m, would aim to reduce energy consumption per tonne of product by even greater annual percentages than achieved in the past, and would

"seek to squeeze the maximum output from existing plants."

Referring to last year's results, Sir Maurice noted that total exports from the UK were over £1bn, a rise of 29 per cent.

Exports to EEC countries rose to £501m from £315m, a 60 per cent increase. Sales on the Continent last year also came to over £1bn, a record figure. He said that part of the reason for the increase in interest in the Ninian field, provided a partial offset to mounting raw materials costs. Sir Maurice emphasised, however, that it was not group policy to subsidise chemical operations with cheap oil; all oil was transferred at world market prices.

Turning to the company's investments in new plant, the chairman said that although the rate of investment had increased in real terms over the last six years, the amount of cash generated by the business in the last two years had been insufficient to cover expenditure on new plants and working capital. Last year's working capital increased by £202m.

Against last year's £760m spent on capital expenditure, ICI planned to reduce the amount by about £75m in 1980. Last year's new approvals had been lower than 1978 levels, though they still came to £532m.

The oil profit, which stemmed largely from the group's interest in the Ninian field, provided a partial offset to mounting raw materials costs. Sir Maurice emphasised, however, that it was not group policy to subsidise chemical operations with cheap oil; all oil was transferred at world market prices.

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Barclays sets out to attract new accounts from 11m unbanked

A 10-YEAR plan to substantially increase its share of the UK retail banking market has been announced by Barclays Bank, the largest of Britain's big four clearers.

The aim is to attract a large number of new accounts from the 11m wage and salary earners who make up the UK's unbanked population. In its annual statement Sir Anthony Tuke, chairman, forecasts that the expansion of consumer banking services in the UK will be one of the three main areas of growth for the group over the next decade.

He warns that the clearing banks will face sharp competition in personal sector business from the building societies and public institutions, such as Girobank.

"Our success will depend on our ability to persuade the Government, unions and employees to move away from cash. This depends to a great extent upon whether we can provide the public with cash where they want it, at all hours of the day, seven days a week, and also upon the development of electronic funds transfers and

plastic card technology."

He describes the "move away from the bank counter" as a pre-requisite for a breakthrough in the personal field. Ironically, Barclays, like one or two other banks, is known to be facing unexpected technical problems with the new on-line cash dispensing machine which Sir Anthony considers so vital.

The chairman identifies the other two main areas offering major prospects for group expansion over the next 10 years as consumer credit and the development and financing of world resources. Consumer credit has been a significant feature which is expected to continue; including, perhaps a modest entry into the home loan market as soon as conditions permit.

For the first time the report set out separately the general and specific provisions for bad and doubtful debts. It was appropriate, says Sir Anthony, to explain the way the bank looks at its provisions.

The specific provision is attached to a particular debt and each manager throughout the world has the responsibility of relegating all or part of a debt to the doubtful category as soon as he has reason to believe this debt will not be repaid in full. Exactly how much of a debt is relegated in this way must be a matter of judgement and it is sometimes said that human nature encourages a conservative attitude. The bank is, however, careful to see to it that over-provision is not taking place and specific provisions are calculated on a basis of likely loss.

General provisions are in a different field. A bank has within its portfolio debts which

though not identified as such may well turn out to be bad. Political risks are an obvious example of this; for instance, the strike in the steel industry will almost certainly bring with it problems amongst borrowings already in Barclays' books.

"It is right therefore that stockholders, who after all own the business, should be advised that in the opinion of the directors there is a clear line to be drawn between the reserves of the bank, which are part of their equity, and a prudent sum to be set aside for problems unidentified as yet."

Under Leach/Lawson Rules, formulated in 1969 before the clearing banks became fully international, general provisions have been maintained within a band of 1 per cent to 1 1/2 per cent of advances and, in recent years, these have been defined by the authorities as excluding advances regarded as risk-free.

The chairman says the time has come to look into the arbitrary distinction between advances at risk and those considered to be risk-free, particularly as the latter category includes advances and deposits placed with banks outside this country and clearly some of these funds are not free from risk.

"The present position in Iran and the American reaction in freezing deposits are examples of a situation that makes this classification less and less realistic," he says.

The existing formula will, Sir Anthony believes, need to be reconsidered but in the meantime he says holders can feel reasonable satisfied that the bank as some £145m set aside for these contingencies.

DIVIDENDS ANNOUNCED

Company	Current payment	Date of payment	Current dividend	Current dividend
Automated Security	1.23	May 31	0.81	2.04
C. D. Bramall	3.21	May 27	2.79	5.99
Currys	6.3	June 1	4.77	11.07
Edinburgh Inv. Tr.	1.4	June 20	1.1	2.51
J. E. England	0.4	June 9	1.02	0.42
Glaxo	0.81	June 20	0.39	1.20
Huntleigh	0.51	July 1	0.37	0.88
M. P. Kent	0.5	May 30	0.37	0.87
Richards & Wallington	3.28	May 30	2.75	6.03
Richards (Leicester)	2.8	May 30	2.75	5.55
Secs. Trust Scotland	2.9	June 22	2.03	4.93
STC	0.5	June 20	0.39	1.20
Standard Telephone & Cables	7	May 28	4.3	11.3
Arthur Wood	1	May 28	1	2.1
York Trailer	0.8	—	1.2	1.97

Dividends shown pence per share net except where otherwise stated.

* Equivalent after allowing for scrip issue. † Dividend increased by rights and/or acquisition issues. ‡ Dividend recurring payment of 0.163p.

STC beats forecast with 24% increase

ON TURNOVER up 17 per cent from £373.6m to £436.5m, pre-tax income of Standard Telephone and Cables expanded from £26.5m to £33.4m for 1979, a rise of 24 per cent, and £4.4m more than forecast last June, in the group's offer for sale.

In October the directors reported interim taxable income of £16m (£14.6m), and confirmed the full-year forecast of not less than £32m.

Sir Kenneth Corfield, the chairman of this UK subsidiary of International Telephone and Telegraph Corporation, the U.S. telecommunications and electronics concern, says the group has got off to a good start in the first quarter of 1980, and "we are looking forward to a good year."

Orders in hand at the year-end were a record £500m, but exports declined by 9 per cent to £77.9m, reflecting higher UK sales content of international submarine cable systems contracts.

Budgeted spending for the current year, Sir Keith states. No major moves are planned on the acquisition front, but he says there are a number of smaller "under serious consideration."

Pre-tax figure for 1979 included exceptional credit of £1.7m (£0.6m charges), relating to contractual price adjustments, net of costs of product line rationalisation, and was after some £4m losses associated with the engineering dispute.

Tax charge for the period was comparatively low due to the benefit of stock appreciation relief and capital allowances. Earnings per 25p share are

shown as 27.5p (21.1p) and, as forecast, the dividend total is 9p net with a final payment of 6p.

See Lex

Huntleigh drops to £578,000

MAINLY REFLECTING the substantial losses incurred at Setpoint, resulting from under-utilisation of capacity and organisational problems, pre-tax profits of the Huntleigh Group dropped from a record £866,420 to £577,815 for 1979. Turnover, however, rose by £2.81m to £11.39m.

At the interim stage, profits had fallen from £303,000 to £230,000.

The year's performance at Hymanite Engineering was directly affected by the prolonged engineering strike, and results from medical equipment were below forecast after absorbing exchange losses.

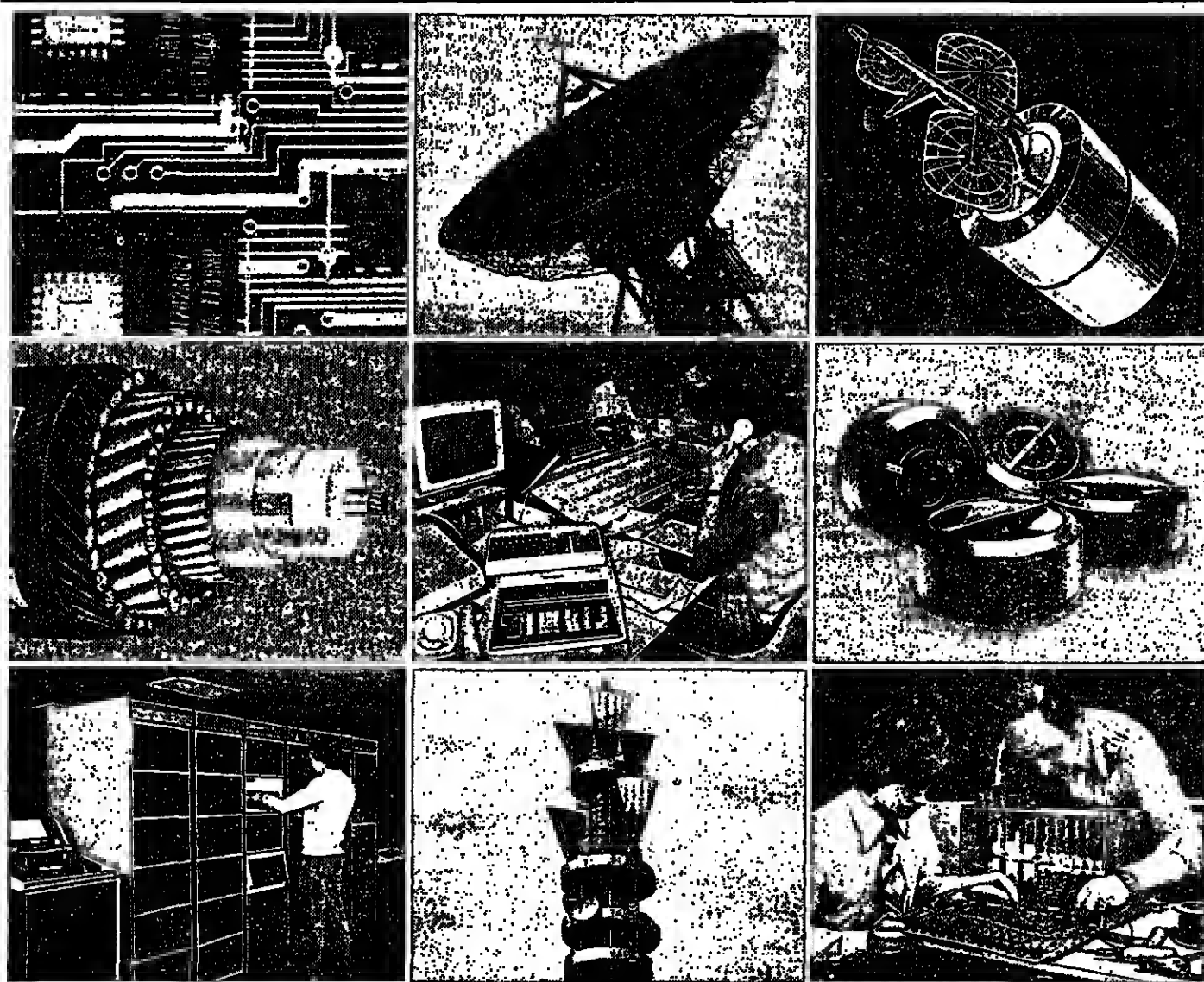
All other companies performed satisfactorily, particularly Micro-Image Technology and Micro-Image Technology (Engineering). Earnings per 10p share are stated lower at 4.8p (5.8p) for the year, but the dividend total is effectively increased, from 0.76143p to 1.19p net with a final of 0.61p.

M. J. H. Nightingale & Co. Limited

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High	Low	Company	Price	Change	Div (p)	%	P/E
98	30	Alpspring	64	+1	6.7	30.8	3.81
50	26	Armitage and Rhodes	28	-	3.8	13.8	1.81
258	186	Bardley Hill	288	+5	13.2	5.1	7.91
100	30	County Cars 107 1/2	30	-	15.3	19.1	-
101	63	Deborah Ord	97	-1	5.0	5.1	10.8
109	88	Frank Horsell	109	+2	7.8	7.2	6.81
128	88	Friedrich Papp	90	-	12.3	12.3	4.61
158	102	George Bliff	107	-	16.5	15.4	-
70	45	Jackson Group	89	-	5.2	7.8	4.01
153	113	James Burroughs	113	-	31.2	6.4	5.5
300	242	Robert Jenkins	278	+3	31.3	11.3	8.91
232	175	Torday	220	-	14.3	6.5	5.71
34	11 1/2	Twinnock Ord	17	-1	0.8	4.9	3.21
30	20	Twinnock 12 1/2	78	-	12.0	15.4	-
56	23	Unilock Holdings	49	-2	2.6	5.3	10.4
59	47	Unilock Holdings New	47	-3	-	-	10.0
99	42	Walter Alexander	96	-	4.4	4.5	6.4
150	136	W. S. Yates	185	-	12.1	6.5	3.01

† Accounts prepared under provisions of SSAP 15.



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CAISSE D'EPARGNE DU VALAIS

CIAL, CRÉDIT INDUSTRIEL D'ALSACE ET DE LORRAINE

FUTU BANK (SCHWEIZ) AG

GEWEREBANK BADEN

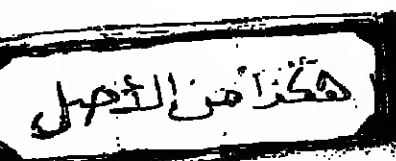
HYPOTHEKAR- UND HANDELSBANK WINTERTHUR

MAERZ, BAUMANN & CO. AG

MORGAN GRENELL (SWITZERLAND) S.A.

SPARKASSE SCHWYZ

March 1980



ICI IN THE 80s: BASIC STRENGTHS TO BUILD ON



Addressing stockholders at the 53rd Annual General Meeting of Imperial Chemical Industries Limited, held in London on Monday 14th April 1980, the Chairman, Sir Maurice Hodgson, said:

Since we last met, there have been a number of changes on the Board. Last month we said farewell to Sir Raymond Pennock. After thirty-three years of distinguished service in ICI, he is to become Chairman of BICC and additionally President of the CBI. Raymond Pennock has contributed to ICI in many ways, as Chairman of Agricultural Division during the most difficult period in its history, and for eight years as a Director and Deputy Chairman of the Company. He has played a major part in our commercial, planning and overseas affairs, especially in Europe and the United States. Raymond Pennock is a man with an instinct for dealing with people and understanding their problems. He has a deep conviction that business has to be fully aware of the social and political climate in which it operates and has to play a constructive part in bridging the "understanding gap" which so frequently exists. I am sure that these talents and perspectives will be of the utmost value to the CBI during his term of office.

Jack Lofthouse has retired after more than forty years' service. He had been a Director for ten years and besides serving as Personnel Director played a leading part in the development of our oil and petrochemicals interests, and of our businesses in explosives and in the Americas. Jack is to become a director of BNO at a time when it is seeking to redefine its role. I can think of no person better equipped to help it do so. He has our very best wishes for the years ahead.

Robin Ibbts has left us temporarily at the Prime Minister's request, to become Head of the Central Policy Review Staff. I am sure his ability and experience will be valuable resources to Government.

We shall greatly miss all three. It is one of ICI's great strengths that its Executive Directors are employees who have worked their way to the Board through a variety of technical, commercial and management jobs. Today we welcome two new Directors, Frank Whiteley, until recently Chairman of Agricultural Division, who has become Personnel Director and is also looking after Production and Engineering; and Denis Henderson, until recently Chairman of Paints Division, who has taken on responsibility for Commercial and Planning matters.

I would also like to refer to Robert Haslam's appointment this month as Deputy Chairman of the Company. He became Territorial Director for the Americas in October 1979 and took up residence in New York, a departure which gives, I believe, a clear indication of the importance we attach to the development of our business in the Americas and especially in the United States. He will remain resident in New York as Deputy Chairman for the time being.

This is the first Annual General Meeting of a new decade. On the whole the 70s have been difficult years. The 80s will no doubt present new and different problems. Already there is a plentiful supply of doom and gloom - the generation of which now seems to have become the United Kingdom's leading growth industry. The choice we should make, however, is not between optimism and pessimism, but between being positive or negative, pro-active or re-active. I have no doubt that ICI has gained during the difficult 70s by being positive about what it needed to do. The record is, therefore, mainly one of achievement.

Our worldwide purpose: better living standards

Our prime purpose is to be profitable and enterprising, making products and providing services people want at prices they are prepared to pay, and by so doing creating wealth and improving living standards, and providing the only real longer term security of employment for those who work for us. But we also have to have a sense of purpose as a community of people working together: a sense of purpose as an international organisation contributing to understanding and trade between nations; and a sense of purpose as a member of each of the communities in which our businesses are located. Over the last ten years I think we have been positive, constructive and mainly successful in all these aspects of our affairs. But it has not been plain sailing. We have faced some difficult business circumstances which have meant reducing or closing some of our activities. But because of the Group's broad product and territorial base we have been able to keep on growing.

I also believe our managers, employees and the trades unions have made progress in working together. Over the last ten years we have further developed and improved our arrangements for employee consultation and participation. I believe that these arrangements bear comparison with the best anywhere.

Last year I told you about my visits to manufacturing Divisions in the United Kingdom to meet people and hear what they were thinking about. Since then I have been further afield to India, Pakistan, Japan, Thailand, Hong Kong, Malaysia and Singapore. We hear a great deal of critical comment from pressure groups about the activities of international companies. These commentators often lack any real understanding of the practical benefit of people working together across national boundaries. Many ICI businesses have plants widely distributed throughout the world, for example chloralkali, petrochemicals and paints. These are operated by people who, besides an intense loyalty to their own enterprises, share common

"Modern world-scale plants, a good product portfolio, a good territorial spread, a measure of self-sufficiency in oil, first class management, skilled, involved employees and good industrial relations"

technology and a common purpose in learning from each other and in being part of ICI.

I feel proud that, in addition to a modest number of British employees around the world, ICI has Indians working in Zambia and Nigeria, Argentinians in Mexico and Brazil, Canadians in West Africa, Australians in the Philippines and Taiwan, Japanese in Malaysia, and Malaysians in Taiwan.

We seek to be a good citizen in all the communities in which we operate. We want our purposes and achievements to be understood and valued. I believe they are and that our reputation stands high. During the last decade in the United Kingdom we have been active in youth training schemes, links with local schools, and support for small business development, and we have worked hard on the control of pollution and toxicological hazards where we aim to operate to the highest standards. In all these many and varied areas we see ourselves acting in the interests of the community as a whole.

Exports boost from EEC membership

I should like to turn now to one of the most significant events of the last ten years, the accession of the United Kingdom to the European Economic Community. It is not my intention to join in the current controversy about the UK's budget contribution or to say anything about the wider political future of Europe. I shall stick to the impact of EEC membership on the Company's business. When we supported the idea of joining the EEC we believed that it would be to ICI's advantage and to the advantage of its customers. Now, eight years later, what does the evidence show? Has there been a dynamic effect? It is, of course, difficult to be certain about cause and effect but the evidence suggests that entry to the Community has been very good for ICI's business.

It is a fact that ICI's trade with Europe took a very sharp turn upwards after British entry. In 1972 our total sales in Continental Western Europe were £235 million; now they are £1,053 million. It is, of course, impossible to say what would have happened if we had not joined but I am sure our sales could not have increased at this rate. Our exports to EEC countries have in fact grown four times as fast as the overall demand for chemicals in the EEC. At the same time we have kept a firm grip on our share of the UK market.

Of course the EEC was never expected to offer British industry something on a plate. It offered the challenge of an enlarged market free from internal tariff barriers, but a highly competitive market and one which retains important regional differences - a point which tends to be overlooked. Our considerable achievement has been the result of determination to get to know the markets and of a steady build-up of production, distribution and sales facilities on the Continent. We have also been able to create a dynamic and mutually beneficial relationship between our operations in Continental Europe and the United Kingdom. Exports from the UK have grown much faster in those countries in which we have built plants. In 1979 exports to EEC countries were £501 million compared with £153 million the year before. This increase of nearly 60 per cent demonstrates the "pull through" effect of local manufacture on exports from the UK, which in turn increases our ability to invest in the UK and create new jobs.

Eight years is nevertheless a relatively short period on which to judge, especially since five of these years have been heavily influenced by oil crises and the associated economic slow-down. Certainly ICI cannot afford to adopt a "Little Britain" mentality. The UK has a population of 50 million and is only 5.5 per cent of the world chemicals market. The EEC has a population of 260 million and is about 34 per cent of the world chemicals market. We must now regard the EEC as our large home market. This is the only way we can maintain and increase the volume of our business and support the high research and development expenditure which is essential to keep our technology and products up to date. And here we should note that, so far, the British chemical industry has not been overshadowed by the technology of any other country.

Looking at the Community from a wider point of view, it is evident that it is not yet realising its full potential either economically or politically. I see the Commission as having been more concerned with maintaining internal competition than with helping a coherent EEC become more competitive externally through the benefits of scale and by creating weapons of commercial defence comparable with those wielded so successfully by those powerful and successful traders, Japan and the USA. In making these remarks I am not advocating protectionism. We support free and fair trade, and the action we have recently advocated against imports of man-made fibres does not conflict with this objective.

Decline of the small stockholder

I would now like to recall an aspect of our proceedings last year when one of our stockholders,

Mr Hill, drew attention to the changing pattern in ownership of the Company's ordinary stock and, in particular, to the decline in the number of private stockholders.

The point he raised is an important one and I should like to take this opportunity of enlarging upon the reply which I gave last year.

As you will see from page 10 of the Annual Report, we had 496,000 ordinary stockholders at the end of last year. Ten years ago we had 574,000, so there has been a reduction of 78,000. As you might expect, it is among the small stockholders that the reduction has taken place. If, for example, we look at holdings of 250 units of stock or less, we find we have 234,000 stockholders now compared with 285,000 ten years ago, a fall of 51,000. At the other end of the scale, we have 73 stockholders each owning more than one million units of stock now whereas ten years ago we had 27. What is perhaps more significant is that these large institutional stockholders own 33 per cent of the Company's share capital, whereas ten years ago they owned only 14 per cent.

These changes are different facets of the same underlying trend. More people are providing for their retirement through pension and life assurance schemes instead of by private saving, and the growth of unit trusts through which investors can spread their risks has also contributed to the channelling of private savings into institutional investment. Another factor is the impact of inflation and, until the 1979 tax cuts, of a long period of high personal taxation on those who have traditionally invested their savings in equities. Moreover, equities have not provided a good return for the investor when measured against the decline in the purchasing power of money.

As I said in my reply last year, we very much regret the decline of the small stockholder but it is not easy to find a simple way of arresting or reversing the trend. Reference was made to measures taken in France where investors receive tax relief on the cost of buying new investments under some circumstances. I think our tax system here in Britain is complicated enough already but I certainly would not rule out something like this as a means of redressing the balance between the private and the institutional investor. I also hope that the greater freedom which comes on prices and dividends will in due course lead to a better deal for stockholders than they have had in recent years. Meanwhile, I believe our own Profit Sharing Scheme helps to introduce new small stockholders, and we welcome the changes in the recent Budget which should encourage participants in our Scheme to retain their shares.

1979 profits up pre-tax from £421m to £560m

And now, Ladies and Gentlemen, I should like to turn to the 1979 Results and the outlook for the remainder of 1980. In doing so, I want to be unequivocal about some excellent achievements. At the same time I cannot avoid a basic sense of frustration about the continuing and harmful effects of inflation. Four figures are a source of considerable satisfaction to the Board. In 1979 exports from the United Kingdom were well over £1 billion (an American billion, that is £1,000 million) and we were No. 1 exporter from the UK in the manufacturing sector; sales in Continental Western Europe exceeded £1 billion, sales in the USA, including our share of sales by Fiber Industries Incorporated, exceeded \$1 billion and profits from oil trading activities were £79 million.

The export figures show how strong our export performance has become. We increased our export volume by 10 per cent last year, despite a strengthened pound, although there has inevitably been some reduction in export margins. We had a positive balance of payments of £592 million which is of vital importance to the UK economy.

The sales figures for Europe and the USA show the further development of our strategic aim to create a powerful ICI presence in the world's two major markets. The £79 million profit from oil trading activities is not an unexpected windfall, as implied in some press comment, but the result of decisions made in the 1960s, and of massive investment when our oil exploration activities proved successful. We involved ourselves in oil exploration and development in the hope of securing a major part of our raw material supplies, but the decision was highly speculative at the time and success in a venture of this kind requires a substantial return. We have achieved that objective. At the same time the £79 million of profit provides a partial offset to mounting raw materials costs. I should emphasise, however, that it is not our policy to subsidise our chemical operations with cheap oil. All oil is transferred at commercial prices.

All these aspects of our operations are cause for satisfaction. You also might expect us to be pleased that pre-tax profits have improved by a third from £421 million to £560 million. This is

indeed encouraging but the fact of the matter is that inflation continues to reduce the purchasing power of profits. Each million pounds of retained profit buys less new plant than it did the year before, and each year inflation increases the amount of working capital needed to finance our operations. In 1979 working capital increased by £262 million. It is true that our rate of investment in new plant has been high. It has increased in real terms over the last six years. Unfortunately, the amount of cash generated by the business in the last two years has been insufficient to cover expenditure on new plants and working capital. The pressures on our liquid resources to fund the short fall led to a reduction of £157 million in 1978 and a further reduction of £256 million in 1979. So, although we went ahead in 1979 with capital expenditure as planned, our new approvals were lower than in 1978, though still at the very high level of £552 million.

As a generalisation, I think it would be fair to say that ICI performs well in a weak United Kingdom economy. But for the reasons which I gave earlier, we cannot be content with that. Over the last ten years we have had to compete and survive in a much bigger and more competitive world environment. The process of adaptation is still continuing and a number of our businesses, Fibres and Organics in particular, are having to reshape and reduce their cost base.

Prospects for 1980

Prospects for the coming year are distinctly uncertain, although the first quarter has started better than we might have expected. The predicted recession has been slow in coming but there is now some evidence of forward demand slackening. Hence it is becoming clearer that it is going to be difficult to obtain the further price increases we urgently need to offset increased costs, and the current high level of chemical and man-made fibre imports are an additional problem which we face in the UK. The effects of any future increase in oil prices or strengthening of sterling will therefore be even harder to absorb in these circumstances. Given these uncertainties in matters over which we have no control, we are reacting by concentrating on matters we can control. We aim to reduce energy consumption per tonne of product by even greater annual percentages than we have achieved in the past. In order to save on capital expenditure and earn a better return, we shall seek to squeeze the maximum output from existing plants. Despite the good progress we have made in recent years, we need to step up our rate of improvement in manpower efficiency and we are seeking additional ways to constrain the growth of working capital, which is a major problem in these inflationary times.

Basic strengths to build on

I began by looking back to the 70s. Looking ahead to the 80s there can be no certainty but the fact is that we have basic strengths to build on. For example, we have modern world-scale plants, to which we added major new installations for olefins and derivatives, fertilisers, chlorinated solvents, chlorine, propylene and polyvinyl chloride last year. We have a good product portfolio, a good territorial spread, a measure of self-sufficiency in oil, first class management, skilled and involved employees and good industrial relations. On that basis, we shall continue to take positive steps to compete successfully.

In the United Kingdom, there has been a welcome respite from Government intervention which means a release of energy into more constructive channels. The end of dividend control has meant that we have been able to decide the rate of dividend without external constraint. We do not see Government as able to do more than provide a climate of support and encouragement for industry. The economic future of the UK really depends on the country producing more, which in turn depends on a steady and widespread growth in economic understanding and on the re-emergence of our sense of common purpose. The Government cannot do this job. It is up to those of us who work in manufacturing industry to solve our problems together and make our businesses successful. This has always been so, regardless of the complexion of the Government of the day.

Resolutions

And now, Ladies and Gentlemen, before taking your questions I should like to refer to the notice convening this meeting, where you will see two resolutions. The first is set out under item 4 (1) of the notice. Its purpose is to give authority to place small amounts of ordinary stock in support of applications for listing on foreign stock exchanges and to issue, in international markets, foreign currency securities convertible into ordinary shares. This resolution is seeking a renewal of the authority given at the last two annual general meetings.

The second resolution is set out under item 4 (2) of the notice. That seeks to increase the authorised capital of the Company by £75 million and, as you will see explained on page 20 of the Annual Report, the object of the increase is to give us a reasonable working balance of unissued capital after taking into account the specific needs that are already foreseen.



Imperial
Chemical
Industries
Limited



RHYS DAVID
reports on

Britain's downtrodden carpet industry

WITH FINAL orders now coming in, the carpet industry is facing a bleak future. Formerly Britain's biggest producer of tufted carpets, it is now struggling to survive the current slump in the carpet market.

Despite an estimated 15 per cent share of the UK tufted carpet market and a high reputation for printed designs, AW has failed to survive the current slump in the carpet market. The industry, beset over recent years by weak prices, overcapacity, slowing imports and declining exports, has lost its parent Champion International \$40m in 1978 has been off for a going concern for several years but failed to attract any takers.

AW's woven carpet operations, which have not been so seriously affected, will continue, providing a buyer can be found, as will the Belgian tufting plant which has been making money. The tufted carpet equipment at Bradford is likely to be dispersed to buyers round the world, however, and the site itself will almost certainly be split up into small manufacturing or distribution units.

The Champion decision virtually writes off its investment in the carpet industry as rising high and confident of a rapid growth in the carpet market. The entry of the EEC is the most dramatic indication of how badly things have gone wrong. But in the past few months there has been a succession of

other similar closures or redundancy announcements. Hosiery, like AW a major textile producer, has cut its labour force from 1,200 to 800 following a loss of more than £1m last year on sales of £39.4m. Carrington Vivalda has also cut employment at its Donaghadee carpet subsidiary where losses of £2m were incurred last year, and the Scottish group BMK is closing its Yorkshire operations at a cost of 300 jobs following losses of £500,000. Employment in the industry, at around 29,000 is 7,000 down on four years ago.

Import share

The carpet manufacturers' problems are to a large extent those shared by much of the rest of British industry—high inflation and interest rates have helped to make importing much more profitable while increasing the difficulties of selling into export markets. Carpet manufacturing has in the past, however, been among the strongest of British industries and by far the strongest of the textile sectors. Until recently, imports have taken only a tiny share of the home market and total UK output has been exceeded only by the U.S.

The slide that has now started is seen by some observers, however, as likely to continue. Thus Mr. Robyn Grant, a Briton heading the operations of Hengs, the Dutch carpet group, forecasts that UK imports will reach 50 per cent of the market by 1984-85. The result, he believes, on present trends will

be further reductions in the size of the UK industry, further liquidations and job losses. The underlying reasons for the evident brittleness of yet another seemingly strong UK manufacturing sector is now a subject of considerable debate within the industry and as in several other consumer goods sectors there are signs of sharp differences between the manufacturers and the retail groups.

Following the rapid growth in the 1960s and early 1970s of tufted carpets—now nearly 80 per cent of the market with weaves holding most of the remainder—the big change which the industry has had to adapt to in recent years has been the growth of carpet superstores. Allied Carpets, the biggest UK carpet supplier, has a bigger turnover in carpets than all but a handful of carpet manufacturers and companies with other big groups also emerging over recent years, such as Harris, over one-third of all carpet sales are now being handled by specialist superstores often located away from the traditional town centres.

It is through these major outlets that the growth in imports has taken place, and they are openly critical of what they see as a failure by UK manufacturers to anticipate or respond to fashion changes. Tastes in carpeting on the Continent and in Britain have traditionally differed quite widely, with a strong preference in Britain for heavily patterned carpets. The trend over recent years, however, has been towards plain carpets—often incorporating sophisticated new yarns to create interesting surface effects.

and away from the traditionally rather loud UK carpet styles. Patterning has been transferred to other items in the room, such as the sheets and duvet covers in recent years has been the in bedrooms.

"Carpet producers on the Continent have become much more acceptable to British tastes over the last two to three years," Mr. Harold Plotnik, chairman of Allied Carpets, argues. Allied is a major purchaser of UK carpets and has its own limited production facilities, acquired because of the difficulty of obtaining the styles and volume of carpet it required from other UK sources. Allied is now devoting a third or more of its showroom space, however, to overseas, and in particular U.S. carpeting.

The success of the heavily promoted American carpet ranges in the UK has been based, according to Mr. Plotnik, specifically on fashion and styling. He discounts the industry's argument that the oil-price advantage enjoyed by U.S. companies is the reason for their competitiveness. "Many British manufacturers are still living in the past and are only interested in making what their machines are good at making," he maintains.

There has been insufficient investment too, some retailers argue, in spinning and this has meant that carpet manufacturers have not been able to obtain in the UK the high quality synthetic yarns which have been giving American carpet its special appeal. Allied also points to a number of other reasons for its increasing purchase of Ameri-

can and Continental carpets. First, there is the sheer volume of Allied's requirement which puts the company in a different league from many of its potential suppliers, some of which find it difficult, Mr. Plotnik claims, to finance purchases of the necessary raw materials for major contracts of the sort the big retailers can place. Even if they can meet initial orders, many smaller UK groups have found it impossible to undertake repeat orders if a particular line sells well. In the U.S. Allied says it has been able to deal with a number of giant suppliers with the necessary capacity to meet its needs and to put on repeats quickly.

Allied, with its network of more than 40 superstores, is substantially bigger than most of the U.S. carpet industry's domestic customers. The success of the heavily promoted American carpet ranges in the UK has been based, according to Mr. Plotnik, specifically on fashion and styling. He discounts the industry's argument that the oil-price advantage enjoyed by U.S. companies is the reason for their competitiveness.

Retail power

The manufacturers see the issue, as might be expected, in a different light, and place much of the blame for their decline in recent years on the very powerful retailing structure represented by Allied and its rivals, and by the big department store groups. Mr. Michael Abrahams, chairman of Associated Weavers, points out that the UK carpet distribution system is now so large and sophisticated that the manufacturer has been reduced almost to the role of sub-contractor. The concentration of the buying system also makes it very easy for importers to penetrate the market. Carpet manufacturers can achieve lower prices only by

reducing margins, forsaking profits and sacrificing future investment. The product often has to be degraded, too, in terms of quality, and this in turn stimulates a search by the retailer for higher quality, more fashionable or distinctive offerings obtainable in the U.S. or on the Continent.

Thus, while UK companies have been struggling, their counterparts on the Continent have staged a recovery since the recession which followed the 1974 oil crisis. Associated Weavers is expecting to make a profit of Bfr 150m (£2.2m) this year in its Belgian plant—a broadly similar operation to Bradford. The difference, according to Mr. Abrahams, who is currently president of the British Carpet Manufacturers' Association, is that Continental companies selling to a much more fragmented retailing system are able to make reasonable profits. Furthermore, because retailing is not so concentrated it has proved more difficult for importers, including UK companies, to penetrate Continental markets.

"In Germany it is necessary to deal with 1,000 people where the same business could be done by seeing 50 people here, and it is difficult to make a major impact unless you have a German sales force," Mr. Abrahams claims. The German market is penetrated by carpet imports but mainly at the lower quality end which German manufacturers have been discarding. The analysis of the problem by carpet manufacturers is in line with complaints frequently made in the past by other sectors of the textile industry, Czechoslovakia knocking on our

door wanting to show us their products," Mr. Plotnik points out. In some cases these low-cost supplies can undercut UK carpets by 20 per cent, and with regular container lorry services in operation it can be as convenient to source from Eastern Europe or Greece as from Yorkshire.

Import controls

The prospect, therefore, is intensified price competition which to the industry at any rate will represent further evidence that Britain's highly efficient retail structure is just too strong for its weakened manufacturing sector. The suggestion is already being made within the industry that some restraint on the consumer's freedom to buy may need to be imposed if sectors such as carpets are to survive in their present form—in other words, import controls. It is being suggested, too, that in conjunction with this, the power of the big groups to drive down prices should be looked at.

There is little evidence as yet that the Government will be willing to pay very serious attention to growing calls within the industry for an inquiry of some sort into the effects of retail dominance. Indeed Government Ministers including Mr. John Nott, the Secretary for Trade, have been at pains recently to stress that the textile industry as a whole must sort out its own problems. If the pressures this year bring about further contraction in the carpet sector, however, the demands from within the industry are certain to grow.

APPOINTMENTS

Finance director at Howard Machinery

Mr. Anthony Williams is to become group financial director of HOWARD MACHINERY. He is at present financial director of Howard Rotavator Company. He will succeed Mr. R. J. Overend whose appointment to Rediffusion Limited as Group financial controller on June 16 has been announced.

Mr. G. Lamb, finance director, Mr. M. T. Spencer, general manager of Spicer Halffield, a Spicers Limited subsidiary, and Mr. C. E. Warmington, a deputy chairman of Reed Group, have been appointed to the Board of SPICERS LIMITED, a part of the Reed International.

Mr. Alan Thwaites has been appointed manager of the BRITISH GAS rough storage project to provide a way of storing gas offshore. Mr. K. E. W. Draker has been made chief supplies officer (exploration) within the engineering supplies branch of the corporation's purchasing department.

Mr. George W. Rogers has been appointed to the Board of WHITE CONSTRUCTION COMPANY, a part of Alfred Booth Group.

Mr. Michael Warner has joined the Board of Directors of WIGHAM POLAND MOTOR, part of the Wigham Poland Group.

Mr. Geoffrey Collins of Geoffrey Collins has been elected president of the NATIONAL ASSOCIATION OF WORKWOMEN CONTRACTORS. His new vice-president is Mr. Richard Stephenson, the honorary treasurer is Mr. C. J. O'Shea.

Mr. Maurice de Renzy has been appointed managing director of BOWEN KINIMONTE,

insurance brokers, which is to be renamed Bowen de Renzy Kinimonte.

Mr. Sydney Perry has been appointed to the Board of SOUTHERN TELEVISION.

Mr. Angus J. Maffland, formerly director of planning and research with Charles Barker City, has been appointed marketing services director with R. W. KINNAIRD.

Mr. J. E. J. Baggs has been appointed general manager of MIDLAND ASSURANCE, part of the Eagle Star Group.

Mr. Philippe de Wick, who is soon to resign as chairman of Union Bank of Switzerland, Zurich, will succeed Mr. Pierre Dreyfus as head of RENAULT FINANCE, Lausanne.

Mr. Jonathan Scott has been appointed an executive director of BARCLAYS MERCHANT BANK in the corporate advice division. He will be relinquishing his position on the Board of Charterhouse Japhet before taking up his new appointment in May.

Mr. E. J. (Terry) Grisley has been appointed director, products and support projects division of VOSPER THORNTON (UK), a member of British Shipbuilders, with the status of local director.

Mr. Peter Camber and Mr. John Shapcott have been appointed directors of EXTEL COMPUTING, a member of the Extel Group.

Mr. Sydney Allen, general works manager of the assembly and ceramic plants of CHAMPION SPARKING PLUG COMPANY, has been appointed assistant director of manufacturing, spark plug operations, Champion Europe. He is based at the Brussels headquarters of Champion Spark Plug Europe S.A.

Mr. J. H. Mellows has been appointed a director of JARDINE MATHESON INSURANCE BROKERS.

Metalrax (Holdings) Limited

An integrated network of engineering companies in England and Wales.

Further material increase

	1979	1978
Turnover	£21,538	£17,038
Profit before taxation	2,529	2,108
Profit after taxation	1,627	1,202

Profits before taxation show a further material increase to £2,529m, giving a return of 46% on net assets employed.

Dividends: Dividends recommended are slightly in excess of twice the dividends paid last year.

Shareholders funds and liquidity: Shareholders funds have increased from £4,536m to £5,620m. The net assets of each company amounted to £1,556m, but £1,621m was paid for the acquisition for cash of George Wilkinson (Bumley) Limited, the full benefits of which have yet to be seen. In addition more than £1m was spent last year on new plant and machinery and improved premises.

Scripts: A scrip issue of one ordinary share for every ten held is being recommended.

Prospects: The group will do everything in its power to prove the problems of doing wrong and will aim as always to do rather better than its competitors.

Copy of the report and accounts from: The Secretary Metalrax (Holdings) Limited, Ardara Road Kings Norton Birmingham B38 9PN. Telephone: 021-459 8571.

Glenfiddich in Gaelic means Valley of the Deer.

A Bedtime Story.

Glenfiddich. An absorbing late-night drink. And if you're looking for something equally absorbing to read, try our label. It's a story of tradition. Of craftsmanship handed down, generation after generation. A story of dedication to the point where this great Highland malt whisky is even bottled at the Distillery. It's all there, distilled into about fifty words. Truth or legend? The subtle yet distinctive taste will answer all your questions. **Glenfiddich** Our label says it all.

Few people need reminding of the fact that last winter was the bleakest, most treacherous in years.

It was the winter of the burst pipe, the disappearing 'B' road, and everyone's discontent.

In the North of England, the conditions were nothing short of Arctic, when Clare Tapsfield, a local vet, set out on her daily calls.

It was the afternoon of 30th December.

The roads were more suited to a one-horse open sleigh than a 66 brake horse-power saloon.

As the good lady was soon to discover, when her car skidded on a patch of ice and disappeared into a drift.

Fortunately, Miss Tapsfield walked away without so much as a bruise.

Her car, however, had more than the odd dent to show for the experience.

In fact, the damage to the bodywork was such that it simply wouldn't budge.

With the result that the gallant 'Thorpes' of Thurgoland (the nearest garage for miles) were called upon to tow it away.

Once it was safely in their care, Miss Tapsfield promptly put in a claim to us, at Commercial Union.

Whereupon, we arranged to assess the damage personally, ourselves.

On the Tuesday after the New Year's holiday, our man muffled up, and set off on the rugged road to Thurgoland.

But before he could report his findings, he first had to find the car.

To help him in this simple

task, the garage kindly suggested he use a shovel, and pointed him in the direction of a six foot snowdrift.

When he eventually dug Miss Tapsfield's car out of cold storage, he decided that it was past saving.

And we immediately agreed to settle in full.

Then all our man had to do was dig a path to the salvage truck.

A mere 20 feet away.

We won't make a drama out of a crisis.



Waiting for the thaw would have meant freezing the payment for Miss Tapsfield's new car



هكذا من الضمير

Interest rates costly to Richards & Wallington

PROFITS before tax and interest of Richards & Wallington, Industries, plant hire, improved 18 per cent from £5.22m to £6.13m in 1979, but the "unprecedented" rise in interest costs resulted in pre-tax profits being reduced to £2.43m against £3.03m.

At halfway the pre-tax profits were down slightly at £1.18m (£1.2m).

Mr. W. R. Richards, the chairman, says the year was one of considerable activity, but good progress had been made in the face of many and varied difficulties.

Negotiations for the acquisition of 49.9 per cent of a privately owned DIY chain with an impressive growth record are virtually completed. The consideration will be £1.6m and the company has an option to acquire the remainder in 12 months time. Profits in 1979 were £500,000 with a substantial increase expected in the current year.

Mr. Richards says that acquisition represents an exciting new venture for the company and he anticipates that material benefits will accrue.

After tax down from £468,000 to £380,000, stated earnings per 10p share are 14.72p (18.38p), and

the net final dividend is virtually unchanged at 2.32p (2.37p), making the total 5.23p (5.03p). Dividends reach £724,000 against £680,000.

Group turnover for the year was £39.57m against £35.48m.

The chairman says that with the strength of its crane fleets and a strong base for growth firmly established, the group is well positioned to exploit its potential as the economic situation improves.

comment

Followers of Richards and Wallington are clearly miffed by the 18 per cent drop in preliminary 1979 pre-tax profits and the market knocked 5p off the shares yesterday, bringing them down to 60p. At the interim, the plant hire company predicted it would exceed last year's record £3.03m profit. Interest charges on the highly geared (1.2 to 1) R and W were 30 per cent higher in the second half than in the first. But sales from manufacturing and distribution also turned sour in the fourth quarter, producing a small loss on the year. The crane hire business remains fair but rates are not rising with inflation. The acquisition of a 49.9 per cent interest in a

privately-owned DIY company is intended to provide some of R and W's cash needs but investors may be sceptical about prospects in this highly competitive sector. The yield at 13.2 per cent and fully diluted taxed p/e of 7.4 reflect the uncertainties.

Allen Harvey dollar fund

Allen Harvey and Ross Investment Management has launched a new U.S. dollar denominated income fund based in Jersey. The new fund will invest in U.S. money market instruments with a life to maturity of up to five years, though the managers say that at the moment they are wholly in the short end of the market. The minimum initial investment is \$2,500 and the estimated initial gross yield will be around 16 per cent. Dividends will be paid gross quarterly.

York Trailer pays less

DESPITE an improvement in second half profits from £290,417 to £391,709, taxable surplus of York Trailer Holdings finished 1979 down from £1.15m to £894,709 much in line with expectations—a peak of £2.74m was achieved in 1977.

And after taking account of the problems the company faces in the short-term, and with a loss in the first quarter of 1980, the directors have decided it would be prudent to reduce the final dividend, from 1.186p to 0.598p, leaving the total at 1.978p net per 10p share, against 2.392p.

Sales of this commercial semi-trailer maker, for the period rose to £39.44m compared with £32.17m and profits were subject to a much lower tax charge of £25,000 (£270,000). And after minorities' loss of £30,434 (nil), the balance came out at £720,143 against £381,417.

In the short-term the outlook is bleak, the directors state. The container manufacturer at Northallerton is being discontinued, and inflation, high interest rates, and the impact of the steel strike has created a business climate which has left

the company with the lowest-ever level of demand.

These conditions, with the redundancy costs at Northallerton, and at Anthony Carrimore which will be absorbed in the first quarter, has resulted in a £700,000 loss for the three months.

To make a sensible forecast for 1980 under the present conditions, is extremely difficult, the directors say.

comment

The dull third-quarter statement failed to prepare the market for York Trailer's full year outcome, where profits in the second half pulled back only £100,000 of the first-half shortfall. The shares slipped 3p to 28p, for a yield of just over 10 per cent. The problem area last year was Anthony Carrimore, which made an expensive foray into the UK market after its major Nigerian business was truncated. Substantial cutbacks, more than halving the labour force, should turn Carrimore round by mid-year. But the costs can be seen in the first quarter of 1980, where redundancy payments there and at Northallerton

lopped some £240,000 off profits. For the current year, if Carrimore is indeed sorted out, York could see £1m or so, indicating a fully taxed p/e of just over 6.

J. England setback but recovery seen

A SECOND half profit of £10,641 against a £72,862 loss, was achieved at J. E. England and Sons (Wallington), potato, grain, produce merchant, but for the whole of 1979 the group incurred a pre-tax loss of £94,573, compared with profits of £41,696. Turnover fell from £37.75m to £31.53m.

The current year has started with steady trading conditions and directors expect that 1980 will confirm that the group has achieved stability. Thereafter they are confident of a return to a satisfactory level of profits.

Although the interim was omitted, there is a final dividend of 0.49p—last year's total was 1.4182p net per 5p share.

M. P. Kent at £1.5m

PRE-TAX PROFITS of M.P. Kent, residential and commercial property developer, increased substantially, as forecast, from £737,000 to £1.52m in the six months to December 31, 1979. Turnover climbed from £5.94m to £7.76m.

Mr. M. P. Kent, the chairman, says that a consistent pattern of prime property development has now been established in diversified and sizeable schemes.

These, together with a significant contribution from the company's housing division will substantially reflect through in current and future trading prospects, he says. The board anticipates that full year profits will be about £3m, enabling further expansion while maintaining reasonable gearing.

After tax £37,000 (£58,000), stated earnings per 10p share have increased from 3.3p to 6.9p, and the interim dividend is effectively raised from 0.365p to 0.5p—last year's total was an adjusted 1.365p from pre-tax profits of £1.86m.

MAPLES STORE IN MIDDLE EAST
MAPLES has opened a furniture store in Doha, the capital

of Qatar, in partnership with Mr. Omar Almana, a prominent Qatari businessman.

The initial investment for the group's 49 per cent interest total £146,000, of which £98,000 is in the form of Loan Stock, the balance being in equity capital.

Trading as ALMANA/MAPLES the new company has been formed primarily to provide furnishing for some of the palaces and large villas.

Securities of Scotland dividend rise

A final dividend of 2.9p has lifted the total payment of Securities Trust of Scotland from an equivalent 3.525p to 4.8p net per 25p share for the year ended March 31, 1980.

Gross revenue amounted to £3.9m against £2.99m, and the available balance came through at £2.08m, compared with £1.46m.

Earnings per share are shown as 5.2p (3.64p) and net assets value is given as 107.5p (128.8p), with prior charges at par.

Automated Security 53% up to record £1.55m

RECORD results for 1979 are announced by Automated Security (Holdings), alarm systems rental concern.

After rising from £382,000 to £620,000 at halfway, pre-tax profits came out 53 per cent ahead from £1.02m to £1.55m for the full period, a turnover up 57 per cent to £11.12m.

And the dividend is boosted to 2p (1.474p) net per 10p share with a final of 1.25p.

The directors say the group will continue to strengthen the density of the security rental operations, with encouraging the growth of the new divisions at home and abroad, and look to the future with confidence.

Rental income expanded 68 per cent to £4.1m during 1979 and profits were subject to tax of £97,882 (£91,043). There was an extraordinary credit of £109,919 (full) and after dividends' cost of £237,597 against £184,945, the amount retained was well ahead from £745,329 to £1.33m.

Earnings per share are shown as 16.51p (10.58p) and net asset value is given 50 per cent up

comment

Automated continues to produce bumper profits. But its fully taxed p/e of 26, or 14 on the declared tax charge, anything less than the 50 per cent jump in pre-tax profits could have taken its toll on the 237p share price. It is undoubtedly a successful business, if anything held back

last year by its investment in new related areas such as fully integrated security systems for whole buildings and close circuit television. Investment in new assets totalled £4m, of which £3.3m was rental assets, covered by cash flow of around £3.3m. So the borrowings are slightly higher in actual terms but as a percentage of capital employed they are down from 35 to 32 per cent, which is not excessive for a rental company. The balance sheet, when reported, should show gross rental assets of £12.6m, or £5.8m depreciated, with an impressive rent roll of over £4m. It is a growth industry and Automated's developments alongside its established rental alarm business should keep profits rising in the 40 to 50 per cent region in the foreseeable future. The rating is high, the yield is small, but the capital growth is there.

Pick up for Arthur Wood

Following the first-half fall of £44,500, pre-tax profits of Arthur Wood and Son (Longport), earthenware manufacturer, were maintained at around the same level as in the second six months of 1978, giving a full year figure of £158,490 compared with £200,541.

The net dividend for the year is virtually unchanged at 1p (1.0032p) per 5p share.

More expansion envisaged as Bramall improves 26%

A 264 PER CENT increase from £1.41m to £1.78m in pre-tax profits is reported by C. D. Bramall, the Bradford-based motor vehicle dealer for 1979. With turnover improving nearly 40 per cent from £20.15m to £28.25m, both sets of figures are records. At the halfway stage, pre-tax profits were £1.01m against £745,000.

Mr. Tony Bramall, the chairman, reveals that the company's search to expand its activities through acquisition is nearing fruition. He adds: "I anticipate that I shall be able to make an announcement very shortly concerning our efforts in this direction."

Turnover in all three of the group's main operating divisions was up on the previous year. The Ford main dealerships contributed £28.83m (£15.53m) of the turnover, contract hire and leasing activities £1.93m (£1.41m), and hire-purchase £415,000, which showed a 27 per cent improvement on the previous 12 months.

After a tax charge of £72,000 (£21,000), net profits are £1.71m (£1.87m). The final dividend is raised from 2.788p to 3.2078p for a net total of 5.2978p

(£5694p), equivalent to 7.5112p gross. Stated earnings per 25p share are up from 28.5p to 33.5p.

Mr. Bramall says the year's results can be considered very satisfactory when viewed against a second half-year which saw many of the unavoidable costs increasing so rapidly.

The group's three main Ford dealerships all increased their market shares despite protracted deliveries of new vehicles during the first six months. This position has now resolved itself and the group is now in a position of being able to supply most models promptly.

The new Bingley depot opened during the year made a small but promising contribution, while the Warrington dealership achieved its best ever results despite the continuing depressed state of the tractor and agricultural machinery market.

Mr. Bramall says it is difficult to forecast the outcome of the current year for there is concern about the large increases in many of the basic costs which the group cannot avoid. He says these will undoubtedly take some toll.

A Test of Strength

Recent events in the silver market caused an incredible but understandable concern in the investment community. The situation affected, either directly or indirectly, a number of the finest brokerage houses on Wall Street.

But in an important way this series of unique events proved the strength of this 100-year-old company. The strength of Bache.

The events during this period have caused an enormous amount of media coverage, speculation and, inevitably, rumor. And we think now is the time to set the record straight, once and for all.

1. At no time was our day-to-day service to any Bache client affected in any way.
2. At no time did Bache fail to meet all capital requirements of the New York Stock Exchange or the Securities and Exchange Commission.
3. At all times Bache met all its financial obligations, both to clients and to the various exchange clearing facilities.
4. At no time did these events require Bache to seek additional capital by borrowing or any other means. Not one penny.
5. At no time did Bache give preferential treatment to any client because he was a shareholder, nor did any shareholder ask for preferential treatment.

These events presented Bache with a number of challenges—challenges that we don't expect to have to meet again. The record shows that we met those challenges and proved our strength.

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Blagden & Noakes (Holdings) Limited

	1979 £'000	1978 £'000
Turnover	61,255	54,523
Profit before taxation	6,653	4,953
Profit after taxation	4,287	3,155
Dividends per share*	7.7p	6.7p
Earnings per share*	28.4p	17.2p

*adjusted for capitalisation issue in 1979.

Extracts from the Statement by the Chairman, Mr. J. K. Noakes, for the 52 weeks to 30th December, 1979.

- Pre-tax profit increased by 14%, despite national strikes affecting the container and plastics moulding operations.
- Big improvement in plastics drum operation.
- Martindale Protection increased profits by 21%. Plans in hand to extend laboratory and testing facilities.
- New Formaldehyde plant at Haverhill will lay basis for continued development in chemical division.
- PROSPECTS
We do not share the gloomy forecasts for British industry, and plan to invest more this year than ever before.

GERMAN BANKING**Results suffer from falling margins**

BY ROGER SOYES IN BONN

THE LATEST annual results from three West German banks have underlined the serious impact that the squeeze on margins is continuing to have throughout the whole of the country's banking sector.

Bankhaus Metzler and Frankfurter Bank, the fifth largest private bank in the country, has announced that it will have to cut its workforce by some 10 per cent this year to reduce personnel costs and meet the challenge to margins.

Although the bank's balance-sheet total jumped by 5.2 per cent to DM 8.3bn (\$4.4bn), operating profits fell by 8 per cent and net profits dropped by 1.5 per cent to DM 25m (\$13.3m). The interest surplus also saw a drop of 1.3 per cent to DM 131m.

This trend of higher growth in business volume, coupled with a decline in earnings, was also reflected in the results for the BHF group as a whole, with the balance-sheet total increasing by 4.1 per cent to DM 18.4bn and net profits falling by 1.2 per cent to DM 37m.

The earnings position suffers by comparison with the particularly high levels of 1978, and also reflects the effects of the bank's restructuring activities during 1979. His restructuring has involved on the one hand, hefty cost for reconstruction work at the bank's headquarters but, on the other, it has meant that other operating expenses have been kept within reasonable limits.

However, the drop in earnings

is a token of the malaise affecting the whole spectrum of the German banking world, embracing the big commercial banks, the smaller private concerns and public Landesbanks. The rapid expansion of business over the past four years has simply not been matched by equivalent rises in net commission and interest payments.

This is clearly shown in the latest results of the Norddeutsche Landesbank, of Hannover, and of Bankhaus Metzler, one of the smaller private banks. Norddeutsche recorded a 6.6 per cent increase in business volume last year to DM 43.5bn, but the interest surplus fell by 9.5 per cent to DM 322m. The interest rate margin is now below 1 per cent.

While bank executives

emphasise that Norddeutsche is getting over its costly involvement with the Rollei camera concern, which suffered badly from Japanese competition, they do not hold out much hope for a dramatic improvement in the bank's results in 1980.

The Bankhaus Metzler results show a similar tendency, but its earnings are understood to be slightly ahead, thus highlighting the advantages of steering away from the breakneck expansion of services (and the resultant mushrooming of costs) pursued by larger concerns.

The relatively modest amount of business handled by the bank has allowed it to restrain operating expenses and achieve a broad balance between its loss-making bond activities and its profitable credit side.

Losses at Bayer Brazil

BY Kevin Doss in Frankfurt

AYER DO BRAZIL, the Brazilian subsidiary of the West German Bayer chemicals group, recorded its first-ever loss last year, largely as a result of the devaluation of the Brazilian currency.

The company's deficit was one of the factors which led to the unexpected set-back for Bayer group profits in the last quarter of 1979.

Bayer said that its Brazilian subsidiary made a loss of Cr 146m (\$3.03m) last year compared to a profit in the previous year of Cr 348m.

Bayer is dependent to a greater extent than its major rivals in the West German chemicals industry, Hoechst and BASF, on foreign markets. About 70 per cent of its turnover is derived either from production abroad or from exports, and Brazil is being developed as one of its most important overseas markets.

In terms of capital investment outside Western Europe, Brazil ranks second to only the U.S. in Bayer's overseas spending programme. This year it is investing Cr 1.6bn in Bayer do Brazil's activities compared with Cr 535m in 1979.

The subsidiary, which includes Bayer's most important manufacturing operations in Brazil, boosted its sales last year to Cr 7.5bn, an increase of some 10.2 per cent. The Bayer group's total sales in Brazil last year, including exports from West Germany and sales by other local subsidiaries, totalled Cr 12.5bn compared with Cr 7.5bn in 1978.

At present, inorganic chemicals account for 27 per cent of sales followed by agrochemicals (pesticides) with 25 per cent, but the current investment programme is focused chiefly on building plants for the production of rubber chemicals and intermediates for the manufacture of polyurethane.

Bayer do Brazil would have shown a profit last year without the devaluation of the cruzeiro, but the 30 per cent devaluation in December caused exchange losses of Cr 371m in addition to other exchange losses incurred through other regular devaluations during the year. Partly as a result of the losses in Brazil, the Bayer group suffered a drop in pre-tax profits in the last quarter of 1979 to DM 187m compared with DM 420m in the final quarter of 1978.

Globus lifts payment

BY OUR ZURICH CORRESPONDENT

SWISS stores group Magazine Group Globus recommends increased dividends of SwFr 70 (85) per share and SwFr 14 (13) per participation certificate, for the year ended February, 1980. This follows a rise in group profits from SwFr 9.6m to SwFr 10.5m with consolidated gross operating earnings going up from SwFr 24.5m to SwFr 25.6m.

Group turnover at Globus, which controls the chains of Globus and ABM department stores, rose to SwFr 866m (\$485.8m). This is 4.5 per cent higher than the SwFr 823.3m recorded in the previous year.

Consolidated sales of Forbo, floor and wall coverings manufacturer, rose last year to SwFr 481m (\$271m) from SwFr 449m in 1978. Cash-flow, however, fell to SwFr 32.5m from the previous year's SwFr 34.5m. Net

Higher BIC sales and earnings

BY DAVID WHITE IN PARIS

BIC, the French-based group known for its throwaway pens, razors and cigarette lighters, boosted worldwide net profits last year from FF 168m to FF 195m (\$44m). Sales were 18 per cent higher at FF 2.48bn, compared with FF 2.11bn in 1978.

The parent company, Société BIC, increased after tax profit for 1979 to FF 47.6m from FF 41.4m in the previous year. It is proposing a 27 per cent dividend increase to FF 14 net per share and a one-for-five scrip issue, bringing nominal capital up to FF 286m.

Results from "BIC" trade-mark products improved by 5 per cent despite handicaps imposed by exchange rate fluctuations, the company said. The consolidated results

included for the first time those of the quality men's outfitter Guy Laroche, which showed a net profit of FF 8.7m and turnover of FF 166m.

Further improvement was evident in BIC's important women's lights business. Net earnings of its subsidiary Diroco, which controls the two leading brand-names Dlm-Rosy and Colroy, rose from FF 54m to FF 68m, on sales increased from FF 686m to FF 772m.

Shares in both these companies which were previously held by Brion Marcel Bieh, founder and chairman, were recently consolidated into the group.

Shell Francaise, French subsidiary of the Royal Dutch Shell group, returned to profit last year with net earnings of

FF 96m (\$22m) after showing a FF 197m loss in 1978. But it is not yet prepared to resume dividend payments. These have been omitted ever since the 1973 oil crisis.

The company, which is active in exploration and production as well as refining and distribution in France, said it managed to hold its overall market position despite being handicapped by relatively high crude supply costs.

The profit was after depreciation of FF 1.33bn, including FF 564m carried forward from the previous year.

The provision for exchange rate fluctuations was set at FF 391m. But Shell said this was well below the level needed in view of the increase in the value of stocks.

Swedish paper groups optimistic

BY VICTOR KAYFETZ IN STOCKHOLM

TWO medium-sized Swedish pulp and paper groups, Holmen Bruk and Södra Skogssigarna, are optimistic about capacity utilisation during most of 1980, according to their annual reports.

Holmen, Europe's largest newspaper manufacturer and the dominant producer of magazine paper in Sweden, writes that owing to a heavy order backlog, "the company anticipates roughly unchanged production and sales conditions until autumn. Nor are there as yet any signs of substantial changes in economic returns."

Holmen more than doubled pre-tax earnings to SKr 111m (\$25m) for 1979 on sales that rose 17 per cent to SKr 2,077m (\$470m). Proposed dividend is SKr 8.50 per share, up SKr 1. Holmen writes that during

1980 it expects to sell the entire production of its new mineral wool factory at Krena, opened in December. During 1979 the group disposed of a loss-making foundry at Bulis Bruk and sold 6,000 hectares of forest to the Swedish state church. The later transaction, linked with guarantees of continued wood deliveries, will yield extraordinary income of roughly SKr 40m in 1980.

Södra is Europe's biggest market pulp producer and is a co-operative venture of south Swedish forest owners but, due to heavy losses in 1977 and 1978, the Government bought a 40 per cent stake last July. The group's annual report says that "even if the economy should turn downward at year-end, raw material stocks in industry need to be enlarged which assures full employment

during 1980 in the southern Swedish forestry." No group earnings forecast is given.

The Södra report revises sales and earnings figures for 1979 compared with last month's preliminary report. It gives pre-tax profit as SKr 35m against a 1978 loss of SKr 303m, whereas the preliminary figures were SKr 27m and a loss of SKr 290m respectively.

Sales are given as SKr 3.81bn up 5 per cent from 1978. The preliminary figures were SKr 2.91bn and a rise of 19 per cent.

After extraordinary items, including extra write-downs of small loss-making mills, the group loss was SKr 131m against a 1978 loss of SKr 274m. The earlier figures were a loss of SKr 140m in 1979 and SKr 261m respectively.

KemaNobel confident on earnings prospects

BY VICTOR KAYFETZ IN STOCKHOLM

KEMANOBEI, Sweden's largest chemicals group, is optimistic in its annual report about earnings prospects for the 1980s after recovering from a four-year decline with a 62 per cent rise in pre-tax profits last year to SKr 183m (\$42m).

Mr. Ove Sundberg, managing director, points to a continued good equity-to-debt ratio, 38.1 per cent against 38.7 per cent for 1978, and adequate liquidity, a nearly unchanged SKr 224m at year-end, as providing sufficient financial strength and freedom of action.

KemaNobel's strategy will combine expansion of inter-

national sales of knowledge-intensive "performance chemicals" and systems with a stable domestic base in plastics and power generation, along with rationalisation of the group's consumer products range, Mr. Sundberg writes.

Foreign sales moved from 53 to 55 per cent of the 1979 total, which was up 22 per cent on 1978 to SKr 3.3bn. Domestic sales rose 16 per cent, with a 34 per cent rise to SKr 971m in the EEC, while growth was slower elsewhere in Europe. Sales in the Middle East jumped 49 per cent to SKr 238m.

Boost to Roche agro-chemicals

BY JOHN WICKS IN ZURICH

AGRO-CHEMICALS sales of the Swiss group F. Hoffmann-La Roche will double to some SwFr 200m (\$113m) as the result of the takeover of the company, La Quinoleine SA, the purchase of which has now been approved by the French Government. Roche has acquired a controlling stake from Cie. Francaise Philips, of Paris.

In 1978, the latest year for which figures are available, La

Quinoleine had sales of FF 227m (\$2.2m) and cash flow of FF 17m. A manufacturer of plant protection chemicals, the company has a plant at Oissel, near Rouen.

The acquisition marks a step in Roche's plan to diversify. At present, the agro-chemical operations of the Basle group are centred on the Swiss-based subsidiary Dr. R. Maag and the former Gattion concern (now called Roche-Maag) in Australia.

UCB restores dividend as profits surge

By Our Financial Staff

MORE THAN trebled profits and the restoration of a BF 140 a share net dividend were announced yesterday by UCB, the Belgian group whose activities range from chemicals to packaging and films.

Profits before tax for 1979 are BF 473m (\$15.8m) compared to BF 151m, and a final dividend of BF 80 a share restores the total payment to the level last seen three years ago.

The profits upsurge is the result of a "better cost equilibrium and an improved competitive position," the company said yesterday. A number of major trading areas have moved out of the red.

Profits from pharmaceuticals rose to BF 234m from BF 133m while films and chemicals returned to profit with BF 17m and BF 50m respectively, in contrast to losses of BF 132m and BF 38m in 1978.

UCB points out that that profits would have been even higher had a switch not been made to LIFO accounting. The change in stock accounting reduced comparable profits by BF 85m. Sales for the group last year were 16 per cent higher at BF 20.4bn.

Vitatron on target

By Our Financial Staff

SHARPLY HIGHER profits in line with those forecast last year for a London share placing are announced by Vitatron, the Dutch group which is Europe's leading maker of heart pacemakers.

Sales for 1979 are 16 per cent higher at Fl 56.1m, and before tax profits show an increase to Fl 7.8m from Fl 3.8m. Profits of not less than Fl 7.8m were forecast.

The board views the future with cautious optimism.

Sales up at Maag

The Swiss machinery group Maag has reported an increase of 5.1 per cent in consolidated turnover in 1979, and maintained its earnings power. AP-DJ reports from Zurich.

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March, 1980

Companies
and Markets

INTL. COMPANIES & FINANCE

Philippines offer to be backed by coal

MANILA — Semirara Coal Corporation plans to offer in the Philippines the equivalent of \$17m in preferred shares that will be convertible, after their fourth year, into coal. Until then, they will be convertible into common shares.

Mr. Michael Adams, an official of the brokering house that will manage the issue, said that the preferred shares would be similar to oil-backed securities that have been offered by London and Scottish Marine Oil Company and to oil-backed bonds issued by Mexico.

Sunshine Mining Company has sold \$25m in silver-backed bonds. The Hunt brothers, of the U.S., said in March that they would sell bonds backed by \$3bn of silver.

Semirara is a new concern, which pools the interests of three Philippine companies that own the coal-mining rights on the 13,750-acre Semirara Island, 150 miles south of Manila.

Semirara plans to offer the preferred shares in units equivalent to \$1,360 each. The shares will carry a 16 per cent annual dividend. Mr. Adams said that after four years the preferred could be converted into about 33 tons of coal per unit.

An investor who cashed in a preferred-share unit had the entitlement to have the 33 tons of coal delivered. In practice, Mr. Adams said, the company would pay the investor the coal's value in cash, after deducting 5 per cent for shipping and selling expenses.

Semirara was raising money in this way because the 16 per cent the company would pay on the shares was substantially less than it would have to pay if it borrowed the money.

AP-DJ

High Court freezes ATI takeover

By Our Sydney Correspondent
THE High Court of Australia has temporarily frozen the acquisition by News Corporation, the press group, of a 50 per cent interest in Ansett Transport Industries, the airline, transport and television group. Mr. Justice Stephens granted a temporary injunction on the application of the Australian Labour Party (ALP).

The court's decision will prevent the Australian Broadcasting Tribunal from further considering whether to allow the transfer of a 50 per cent interest in Ansett and its wholly-owned Melbourne Television station to a subsidiary of News Corporation. The News group already has television interests and the approval of the tribunal is needed before it can register the Ansett holding.

Thomas Nationwide Transport, the transport group involved in a formal takeover offer for the remaining 50 per cent of Ansett, and already holds 48.5 per cent, leaving only 1.5 per cent outstanding.

The ALP's application to the High Court follows a clash earlier this month at the tribunal hearing, between the ALP's senior counsel and the tribunal chairman, Mr. Bruce Gynell, which resulted in the ALP withdrawing from the hearing.

Volkskas to make rights issue

By Jim Jones in Johannesburg
VOLSKAS, South Africa's third largest bank, has announced a rights issue to raise R30m of capital, involving 6.45m shares on the basis of 30 new shares for every 100 held at a price of 470 cents per share. Results for the year to March 31 1980 have yet to be released, but for the six months to September 30, the group reported a 22.1 per cent attributable profit advance to R11.1m, against R9.1m in the same period a year earlier, with the expectation that a similar advance would be recorded in the second half. In the year to March 31, 1979, consolidated attributable earnings were R21.8m.

Last year the group bought a direct 30 per cent stake in Legal and General's South African operations, activities outside the commercial banking sphere have been aggressively marketed, while several ailing industrial interests have been brought back to health.

Preliminary rights issue details contain no mention of whether management believes the dividend will be maintained on the increased capital. But at the half-way stage, in September, the 12 cent interim dividend was covered 4.9 times, by first half earnings of 51.7 cents. For the year to March 31, 1979, dividends totalling 26 cents were paid from disclosed earnings of 102.6 cents.

In Johannesburg, Volkskas shares have been trading at 560 cents.

Cheung Kong boosted by extraordinary profits

BY PHILIP BOWRING IN HONG KONG

CHEUNG KONG (Holdings) the Hong Kong diversified property group has announced an attributable profit for the year ended December 1979 of HK\$254.1m (U.S.\$50.8m), an increase of 82 per cent on the figure for 1978. In addition, Cheung Kong made extraordinary profits of HK\$385.5m compared with HK\$112m in the previous years. A final dividend of 37 cents is being paid, making a total of 56 cents, against 36 cents for 1978.

The group is also to make a one-for-one scrip issue. Mr. Li Ka-shing, the chairman, says that Cheung Kong expects to maintain the rate of dividend on the increased capital, at a cost of HK\$150m next year.

The results are in line with market expectations. The profit includes the equity accounted portion of profits of Hutchison Whampoa, of which Cheung Kong owns 31 per cent, having bought 22 per cent from the Hongkong and Shanghai Banking Corporation last year. Cheung Kong will generate cash flow this year with completion of several major development projects. The projected cash flow in 1980 Mr. Li says, will cover all group debt at the end of 1979. This includes the portion of the Hutchison purchase being made on a deferred basis. The total cost of the purchase from the HK Bank was HK\$638m.

Fairfax sells Canberra TV stake

BY JAMES FORTH IN SYDNEY

JOHN FAIRFAX, the press group, has agreed to sell its 40 per cent stake in Canberra Television to a Western Australian businessman, Mr. Kerry Stokes, who intends to make a bid for the remaining shares.

Mr. Stokes has agreed to pay A\$5.30 a share, a shade above a proposed formal offer of A\$5.28 a share, which had already been announced by Television Wollongong Transmissions (TWT).

The price agreed by Mr. Stokes values Canberra TV at A\$12.75m (US\$13.8m). TWT had been buying in the market and has built up a stake of 15 per cent in Canberra TV. Mr. Stokes has claimed a holding of 7.5 per cent in addition to the 40 per cent.

John Fairfax holds a direct interest in Canberra TV of 30 per cent, and two of its employee pension funds own another 10 per cent. The holdings had been up for sale since late last year as a result of Fairfax's participation in a A\$70m defence operation to prevent the News Corporation from taking over the News Corp.

Mr. Rupert Murdoch, succeeding with a takeover bid for Australia's largest press and television group, the Herald and Weekly Times (HWT).

Fairfax paid A\$50m for a 14.9 per cent stake in HWT but had to put its interests in Canberra TV and Queensland TV up for sale because of legislation restricting the level of television ownership. The 60 per cent stake in Queensland TV was sold recently for A\$17m to Amalgamated Wireless

(Australia), which bid for the remainder of the company. Mr. Stokes and his partner Mr. Jack Bendat hold extensive interests in Western Australia, principally in shopping centres, but have recently extended into television. They each hold 15 per cent of the television company, South Western Telecasters, which operates two stations in Western Australia. Mr. Stokes will probably need to sell his holdings in the WA television company because of the ownership limitations.

Caltex Australia ahead

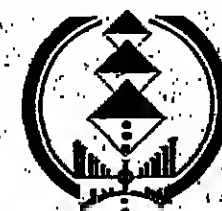
BY OUR SYDNEY CORRESPONDENT

THE CALTEX OIL group more than doubled its profits in Australia in 1979 from A\$20.7m to A\$43.3m (US\$48.9m). This clearly exceeds the previous peak of A\$25m achieved in 1976.

The return on assets employed rose from 5.7 per cent in 1978 to 8.3 per cent, but was still below the 8.7 per cent achieved in 1977.

Despite the higher profit, the dividend paid to the U.S. parent, Caltex Petroleum, has been trimmed from A\$9.4m to A\$8.4m. Group petroleum sales dipped 3 per cent to A\$4.2m kilolitres.

The group has embarked upon a capital reconstruction in which Caltex Securities, the fund-raising member of the group, will become the holding company for Caltex's refining, shipping and marketing interests.



El-Shams Pyramids Company for Hotels and Touristic Projects, S.A.E. US\$12,500,000

for the Construction of the
Holiday Inn Sphinx Hotel, Gizeh, Egypt

Managed by
American Express Bank
International Group

Citicorp International Group

Co-Managed by:

National Bank of Egypt

European Arab Bank Group - UBAF Arab American Bank

and provided by

National Bank of Egypt

European Arab Bank

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American Express International Banking Corporation

Egyptian American Bank

National Société Générale S.A.E.

Arab Bank Limited

Bank of Alexandria

The Chase National Bank (Egypt) S.A.E.

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April 1980

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هكذا من الدول

Childs Corporation

has merged with
a wholly-owned subsidiary of

Ward White Group Limited

The undersigned acted as financial adviser to
Childs Corporation in this transaction.

Lehman Brothers Kuhn Loeb
Incorporated

NEW YORK • ATLANTA • BOSTON • CHICAGO • DALLAS
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April 10, 1980

Companies and Markets

LONDON STOCK EXCHANGE

Gilts surge higher and short tap finally runs out

Longs' strength should ensure new tap sell-out

Account Dealing Dates
Options Last Account
Dealing Dates
Mar. 24 Apr. 10 Apr. 11 Apr. 21
Apr. 14 Apr. 24 Apr. 25 May 6
Apr. 25 May 8 May 9 May 19

New time dealings may take place from 3 am two business days earlier.

Government stocks continued to surge higher yesterday. A further inflow of investment funds quickly exhausted the authorities' remaining supplies of the short tap stock exchange. The short tap stock exchange, which had been closed since last week's sales at prices up to that level. The demand for Gilts arose mostly from domestic sources, although some Middle East interest was circulating on the back of sterling's strength, and led to exceptionally sharp gains in longer-dated issues. This made the terms of the new long tap announced last Friday very attractive and should ensure a big application when subscriptions list for the £200-million Treasury 13½ per cent 2004-08, open on Thursday. The driving force behind the upturn appeared to be mounting optimism about a fall sooner than previously envisaged in current interest rates. An agency report yesterday suggesting that a cut in Minimum Lending Rate was unlikely before September, shook out some loose holders and caused a temporary reaction, but the stock offered was eventually absorbed and much of the lost ground was regained. Another favourable feature was demand for the recently static special low-coupon tap stock, Exchange 3 per cent 1984, which the Government broker activated at 70 before withdrawing.

Leading shares extended Friday's late firmness, being content to bask in the strength of Funds. The first day of the new Account dealing equities brought little increase in activity, however, and soon after midday some leaders turned uncertain. It followed that a fund-raising operation may accompany Glaxo's half-yearly results led to speculation and sentiment in the late trade was generally affected by the announcement of group profits well below expectations; Glaxo closed 14 down at 226½ and the FT 30-share index, after recording a rise of 5.0 at 1.00 pm, closed a net up at 438.2. In a more active business than of late, Traded options attracted a total of 973 contracts. This compares with Friday's 265 and last week's daily average of 433. Among the more lively issues were ICI, 148, and 113, and Grand Metropolitan, 144. Suspended at 139½ prior to the announcement that the company

has agreed to accept the increased bid terms worth 175p per share offered by Marsh and McLennan, dealing in C. T. Bowring were resumed at 160p before a close of 155p for a rise on the day of 16. Other Lloyds brokers were excited by the development and gained good ground on hopes that more U.S. takeovers may be in the pipeline. C. E. Heath rose 9 to 217p. Willis Faber 8 to 238p, and Stewart Wrightson added 10 to 205p, while W. H. Smith added 10 to 101p and Sedgwick Forbes 4 to 102p.

Life issues made progress with sentiment helped by the recent good results announced by Pearl and Hamlyn Life, the former closed 14 to the good at 310p and the latter rose 10 to 174p.

Buying in a market none-too-well supplied with stock on cheaper money hopes brought rises in Hire Purchase, Lloyds and Scottish stood out with a rise of 7 to 136p, while Wagon Finance added 5 to 41p and Provident Financial improved 4 to 103p.

Discounts mirrored the firmness of gilts and had Alexander 15 to 325p and Alexander 10 to 306p. The major clearers improved with the general trend and closed with rises ranging to 10. Bank of Scotland put on 5 to 252p in front of today's annual results. Hambros rose 13 to 355p in merchant banks.

Institutional support was evident for leading Breweries which ended with gains to 22p. Bass added that amount to 22p, while Whitebread 14½p, and Scottish and Newcastle 55p, put on 2 and 2 respectively. Among otherwise subdued regional issues, Vaux 14½p, and Wolverhampton and Dudley, 31½p, both gained 4.

A fair amount of interest was shown in leading Building descriptions with Blue Circle and Tarmac firming 7 pence to 307p and 223p respectively. Amnion Contracting and Construction issues, Costain firmed 6 to 146p, while Brown and Jackson, a plastic market, rose 1½p to 155p, and picked up 15 to 135p. Wilson (Communi) advanced 8 to 184p in a thin market, but Richards and Wallington shed 5 to 60p following lower annual profits.

ICI touched 376p in early dealings, but drifted back following the chairman's cautious remarks at the annual general meeting and settled unchanged on balance at 372p. Fisons reverted to 274p, after 277p. Elsewhere in Chemicals, Laporte hardened a couple of pence to 161p, while Leigh added 4 to 122p, the latter on speculative support.

Small buying prompted useful

gains among Store leaders, although an easier trend was noted towards the close. Mothercare added 6 to 238p, while rises of around 5 were recorded in GUS "A", 384p, and British Home, 272p. Raybeck, 71p, UDS, 70p, and Marks and Spencer, 80p, all rose 2. Barton, on the other hand, weakened further on the interim statement and shed 2 more to 111p, after 106p. W. H. Smith attracted a good business ahead of tomorrow's preliminary results and ended 3 better at 145p, while Carrys picked up 5 to 162p on consideration of the increased annual dividend.

The Leisure sector was featured by a speculative gain of 11 to 134p in Pleasurem. Down 7 on Friday on news that the police are seeking cancellation of four of the group's London casino licences, Coral rallied a couple of pence to 68p.

Traveller shed 3 to 28p following poor results and gloomy statement. Thomson T-Line Caravans, on the other hand, jumped 11 to 65p following further speculative support. Components usually closed firmer with Napra adding a penny to 75p after Press comment.

Hopes that interest rates are set to fall in the near future encouraged further demand for Properties. Up 13 on Friday, Land Securities added a couple of pence more to 309p, while MEPC rose 5 to 207p. Capital and Counties and Haslemere Estates put on 4 pence to 106p and 310p respectively, while Great Portland Estates firmed 7 to 237p and Stock Conversion 10 to 385p. Still reflecting the £2.5m deal with Calor Gas, London and Provincial Shop advanced 16 to 330p, while Hamersson A gained 20 to 60p. M. P. Kent put on 7 to 60p in response to the excellent annual results. Among the more speculative issues, Regional A and Mountview Estates both added 4 to 111p and 132p respectively.

While Trafalgar Park Estates gained 7 to 142p, Rises of around 3 were marked against Greycoat Estates, 113p, Marlborough, 38p, and London Shop Property, 88p.

BP still overshadowed by the chairman's profits warning, BP succumbed to a further bout of selling, mainly in the late dealings, to close 14 down at 240p. Other Oils made fresh progress with Lasmo rising 3½ to 450p and Ultramar gaining 25 to 418p. In 1980, BP's 1980 dividend was 12p, while 1981 dividend was 12p, while 1982 dividend was 12p, while 1983 dividend was 12p, while 1984 dividend was 12p, while 1985 dividend was 12p, while 1986 dividend was 12p, while 1987 dividend was 12p, while 1988 dividend was 12p, while 1989 dividend was 12p, while 1990 dividend was 12p, while 1991 dividend was 12p, while 1992 dividend was 12p, while 1993 dividend was 12p, while 1994 dividend was 12p, while 1995 dividend was 12p, while 1996 dividend was 12p, while 1997 dividend was 12p, while 1998 dividend was 12p, while 1999 dividend was 12p, while 2000 dividend was 12p, while 2001 dividend was 12p, while 2002 dividend was 12p, while 2003 dividend was 12p, while 2004 dividend was 12p, while 2005 dividend was 12p, while 2006 dividend was 12p, while 2007 dividend was 12p, while 2008 dividend was 12p, while 2009 dividend was 12p, while 2010 dividend was 12p, while 2011 dividend was 12p, while 2012 dividend was 12p, while 2013 dividend was 12p, while 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**AUTHORISED
UNIT
TRUSTS**

[illegible]

OFFSHORE & OVERSEAS FUNDS

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